FOUNDED IN 1856

RAILWAY AGE

THE STANDARD RAILROAD WEEKLY FOR ALMOST A CENTURY

JUNE 18, 1951

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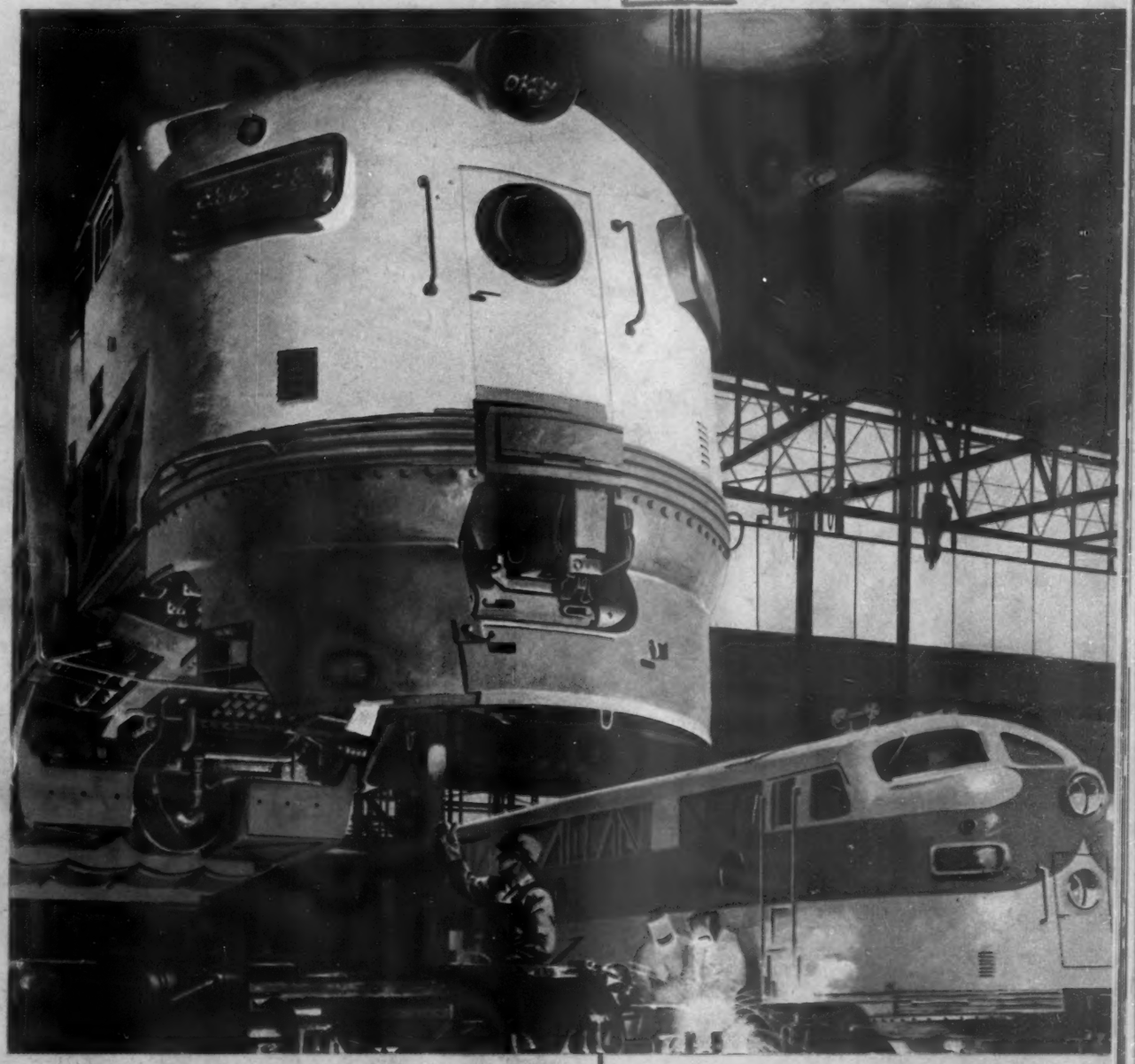

Electro-Motive Builds the 10,000th General Motors Diesel Locomotive Unit

ELECTRO-MOTIVE DIVISION

GENERAL MOTORS LOCOMOTIVES

GENERAL MOTORS • LA GRANGE, ILLINOIS
Home of the Diesel Locomotive
In Canada: GENERAL MOTORS DIESEL, LTD., London, Ontario

MORE STEAM LOCOMOTIVES AND RAILROAD CARS IN THE U.S. ARE LUBRICATED WITH TEXACO THAN WITH ANY OTHER BRAND

Texaco Superheat Valve Oil WITHSTANDS HIGHEST TEMPERATURES

Especially designed for steam locomotive service, *Texaco Superheat Valve Oil* protects cylinders, pistons and valves under the highest superheat temperatures. It clings tenaciously to cylinder walls . . . and guards against wear even when high water causes a wet steam condition.

In addition, *Texaco Superheat Valve Oil* resists attacks from front-end smoke box gases during drifting . . . assures longer life for valves, rings, cylinder packings and piston heads. You can count on it to reduce your maintenance costs.

Another cost-saving lubricant is *Texaco 922 Grease.* Although soft enough to be applied by pressure gun, *Texaco 922 Grease* has extremely high load carrying capacity. Its super-tough films give long-lasting protection to valve motion bearings, crossheads, brake rod pins, spring rigging pins, and many other parts.

There are Texaco Railroad Lubricants to meet every need . . . and Texaco Systematic Engineering Service to assure you cost-saving, effective lubrication everywhere. Let a Texaco representative tell you about them. Just call the nearest Railway Sales office listed below or write The Texas Company, *Railway Sales Division,* 135 East 42nd Street, New York 17, N. Y.

LOCOMOTIVE LUBRICATION CHART

Large (59" x 38") detailed diagram of typical steam locomotive. Lists 1,051 parts, shows the proper Texaco lubricants to use. We shall be glad to send you a copy, without charge. Just tell us the name of your railroad and your position and title, please.

NEW YORK ★ CHICAGO ★ SAN FRANCISCO ★ ST. PAUL ★ ST. LOUIS ★ ATLANTA

TEXACO

TEXACO Superheat VALVE OIL

Are You Ordering Higher Alloy Grades Than Necessary for Your Defense Orders?

Many of the high-priority defense orders now being submitted by manufacturers of essential equipment call for steels considerably richer in alloy content than is necessary.

Such practice is wasteful. It wastes nickel, molybdenum and other alloying elements that are in short supply throughout the nation.

Here is an example. Bethlehem recently received an approved order for 4340 nickel-chromium-molybdenum steel, aircraft-quality, in a small size presumably for aircraft-engine parts. After Bethlehem metallurgists looked into the situation it developed that this steel was actually intended for making brackets that hold together the crates in which aircraft engines are shipped. It was obvious that ordinary carbon steel would serve the purpose, and our metallurgists recommended the use of 1045 grade, which was finally accepted.

Generally speaking, unless special properties such as heat-resistance or corrosion-resistance are required, there is no advantage in using steels with more alloy content than the minimum needed to make the piece quench out properly. Over-alloying will only serve to increase the sensitivity of the steel to quenching cracks. If you have any questions, particularly on conservation of the alloy steels needed for defense purposes, call or write for metallurgical advice.

BETHLEHEM STEEL COMPANY
BETHLEHEM, PA.

On the Pacific Coast Bethlehem products are sold by Bethlehem Pacific Coast Steel Corporation
Export Distributor: Bethlehem Steel Export Corporation

BETHLEHEM ALLOY STEELS

BETHLEHEM STEEL

ALL YOU EXPECT FROM A JOURNAL BOX ...AND MORE

WHEN you apply modern roller bearings to your passenger cars you expect smooth easy starts, improved riding quality, reduced starting drag, and dependable operation. With Hyatt Roller Bearing Journal Boxes you get all this and more.

In addition to doing just about everything any other journal box can do, Hyatt Journal Boxes can be removed from car axles by hand without loosening any bolts or breaking any press fits ... they can be completely disassembled down to the individual rollers for complete inspection without using any special tools ... they require no fussy adjustments ... regular shop people can be easily trained to service them completely ... boxes of the same size and type can be interchanged freely, permitting reduced inventories of spares.

Write for our journal box visualizer and see for yourself why "it's easier with Hyatts"—easier on the rider and easier on maintenance. Hyatt Bearings Division, General Motors Corporation, Harrison, New Jersey.

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Vol. 130, No. 24 June 18, 1951

RAILWAY AGE

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IN THIS ISSUE

EDITORIAL COMMENT:

What to Do About Destructive Regulatory and Court Actions 33

Characteristics of the Chief Executives' Roster 34

A Complex Engineering Problem 35

GENERAL ARTICLES:

What H. & M. Is Doing to Its Stations 36

Coal-Burning Gas-Turbine Moves Ahead, by
John I. Yellott, Peter R. Broadley and Frederick D. Buckley 39

"Does Safety Need Sex?" 43

Frisco's Light-Traffic C.T.C. Uses Power Switches and Spring Switches 46

Frederic C. Dumaine, Jr., Succeeds His Late Father
as New Haven President and Chairman 49

User Basis Depreciation Accounting on the Canadian Pacific 50

Accounting Division Holds Its Largest Convention 53

DEPARTMENTS:

General News 57

Railway Officers 72

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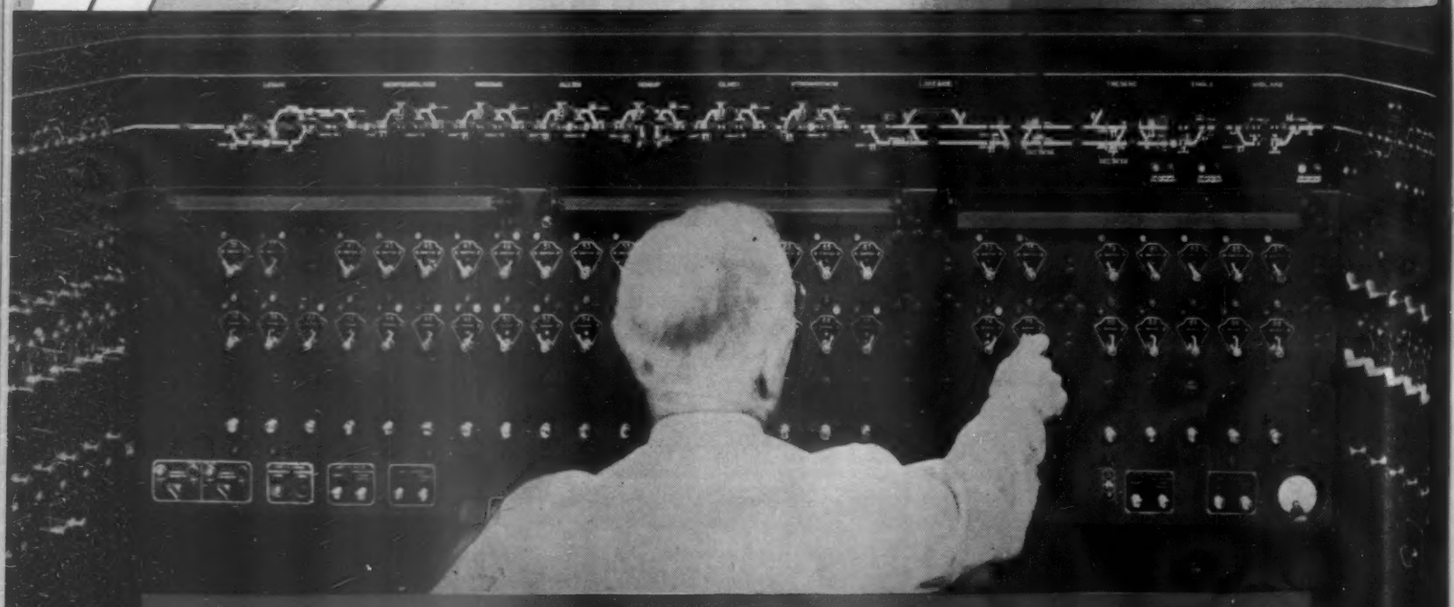
Select the Best Control Point For Your New Signaling!

Thanks to modern "Union" control systems . . . the control point for a new signal installation can be ten, twenty, fifty, a hundred or more miles from the actual controlled territory.* Economical . . . too . . . because only a two-wire line . . . upon which other facilities can be superimposed . . . is required to bridge the intervening distance.

Railroads are free to select control points which will provide the greatest operating and economic advantages from their C.T.C. . . . Interlockings . . . and other installations. That is why so many roads are now *concentrating control at division headquarters* . . . to obtain the highest degree of efficiency by fully utilizing the division-wide knowledge of operations available only to headquarter's personnel. May we give you further details?

*In twelve installations, on 9 railroads, the average distance from the control point to the territory is 61 miles.



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NEW YORK CHICAGO ST. LOUIS SAN FRANCISCO

WEEK AT A GLANCE

REGULATION FOR ITS OWN SAKE: What do the regulatory agencies and the courts mean to accomplish by applying to 1951 conditions in the highly competitive transportation industry completely unrealistic and anachronistic rules and principles designed to meet situations that conceivably could exist only in an era when a transportation monopoly existed? What can the transportation industry—particularly the railroads—and the public (which is the chief sufferer from the adverse effects of such excessive shackling of managerial capacity and attrition of earning power and credit) do about this dangerously destructive tendency? The answer to the former question may be a matter of metaphysics, but an answer to the latter can be framed in simple terms of the public interest. As our leading editorial suggests, the railroads can use every appearance before a legislative or judicial or regulatory body to state and restate the fundamental realities of the transportation situation so often that even agencies conditioned against reception of such truths eventually will be compelled to recognize their existence and their validity. The alternative to such practical educational measures could be the elimination, as a result of unbearably burdensome regulatory practices and enforcement procedures, of self-supporting common carrier transportation.

FOCUS ON SAFETY: Safety officers of the railroads had their annual get-together in Detroit a few days ago, and their proceedings are reviewed in an article herein (page 43). While the railroads' safety record is consistently better as the years pass, that isn't enough, participants in the meeting agreed, and they explored from many angles proposed means to dramatize accident prevention in terms of the individual's self-interest as a technique to get good results faster.

NEXT WEEK: The June 25 *Railway Age* will be devoted largely to subjects particularly pertinent to the forthcoming annual meeting in Chicago of the A.A.R. Mechanical Division. One article will explain how a diesel builder helps railroads realize the maximum economies attainable from dieselization. Another explains how passenger car cleaning operations may increase costly corrosion. Still another tells about the A.A.R. study of freight-car ride.

"WE CAN'T GO ON FOREVER financing fixed plant improvements out of net earnings. Railroad credit must be restored." So P. B. McGinnis, board chairman of the Norfolk Southern, told last week's annual meeting of the A.A.R.'s Accounting Division, in a two-fisted speech in which he outlined his conception of what is necessary for railroad credit improvement and what he thinks accounting officers can do to help. Those who attended the record-breaking meeting—largest ever held by the division—also heard accounting officers eulogized by two railroad presidents as "intelligence agents" of management, to whom "operating men owe a great debt." They heard a number of their own members, including A.A.R. Vice-President E. H. Bunnell and Division Chairman I. V. Jessee, pound home, in speech after speech and report after report, the necessity for "mechanization" of railroad accounting and for still wider adoption of streamlined methods and procedures. And they had an opportunity to see for themselves what could be done in those directions with some of the modern machinery on display for their special benefit. Full details of the meeting begin on page 53.

COAL-TURBINE COMING ALONG: Progress in the development of the coal-burning gas-turbine locomotive has not been spectacularly rapid, but it has been steady and soundly grounded, and it has now reached a point where it can be said confidently that the ultimate success of the locomotive as a physical mechanism is highly probable. The practical application of this type of motive power can be expected, therefore, to resolve itself eventually into an economic question. Meanwhile, the latest "progress report," dealing particularly with satisfactory developments at the Dunkirk experimental coal-burning turbine installation, is summarized in one of our articles this week.

EXPENDITURES HEADING TO NEW HIGH: According to estimates by the Class I roads, summarized in the Interstate Commerce Commission's latest "Monthly Comment," these railroads' gross capital expenditures in the first *nine months* of 1951 will total $1,073,000,000, which *exceeds the total for the whole year 1950* (which was $1,066,000,000). If the same percentage relationship with last year's figures should prevail during the final quarter of this year, the 1951 total will set a new all-time high record for gross capital expenditures, surpassing the 1949 peak. The "Monthly Comment" also includes a significant analysis of dining car expense and revenue figures of 21 large railroads, which indicates they laid out, on the average, $1.384 in direct dining car expenses last year to bring in $1 of revenue. As reported in our summary of the "Monthly Comment" in this issue's news pages, this figure is slightly under the comparable 1949 average, a situation so unusual in this time of inflation that it borders on the phenomenal.

BANISHING VICTORIAN GLOOM: The results of intelligent use of light, of recent decorative and functional applications of glass and stainless metal, and of "streamlining" crowd movements to minimize congestion are apparent in the new Grove Street station of the Hudson & Manhattan in Jersey City, which is the subject of an article in this issue (page 36). Wherever there is enough railroad passenger traffic—actual or potential—to be profitable, it is to the advantage of every railroad, obviously, to make its facilities attractive, encouraging favorable comparison with the modern structures travelers see everywhere they go. As the Hudson & Manhattan and other railroads have demonstrated with both large and small stations, such results often can be secured as effectively by making over old structures as by building new ones.

LIGHT-TRAFFIC C.T.C.: By using a spring switch at one end of each siding, and a power switch with signals at the other end, the Frisco has cut the cost of an experimental C.T.C. installation on its light-traffic single-track line between Springfield, Mo., and Thayer, 137 miles. What the work involved is told, with a track diagram and typical siding layouts, beginning on page 46.

Recognize a C-1 when you see one

Six big advantages make National C-1 Lading-Conscious Trucks outstanding

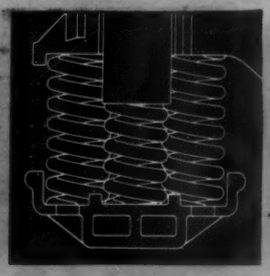
National C-1 trucks are easy to spot because you can inspect them at a glance. And simplified inspection is only one of many construction advantages built into each C-1 truck. Check these advantages yourself:

A-5851

1 FULL VIEW of friction control mechanism in side frame gives immediate assurance that snubbing mechanism is functioning properly. No time delays, no costly handling, no parts to be removed.

2 WEDGES ARE RUGGED high strength castings uniformly heat-treated throughout to provide longer wear life. Convex surface has full-width bearing on side frame; flat surface bears on hardened steel bolster wear plate.

3 NATIONAL'S WEDGE SPRINGS are cold-wound, shot peened, low stressed and low rate to insure long life.

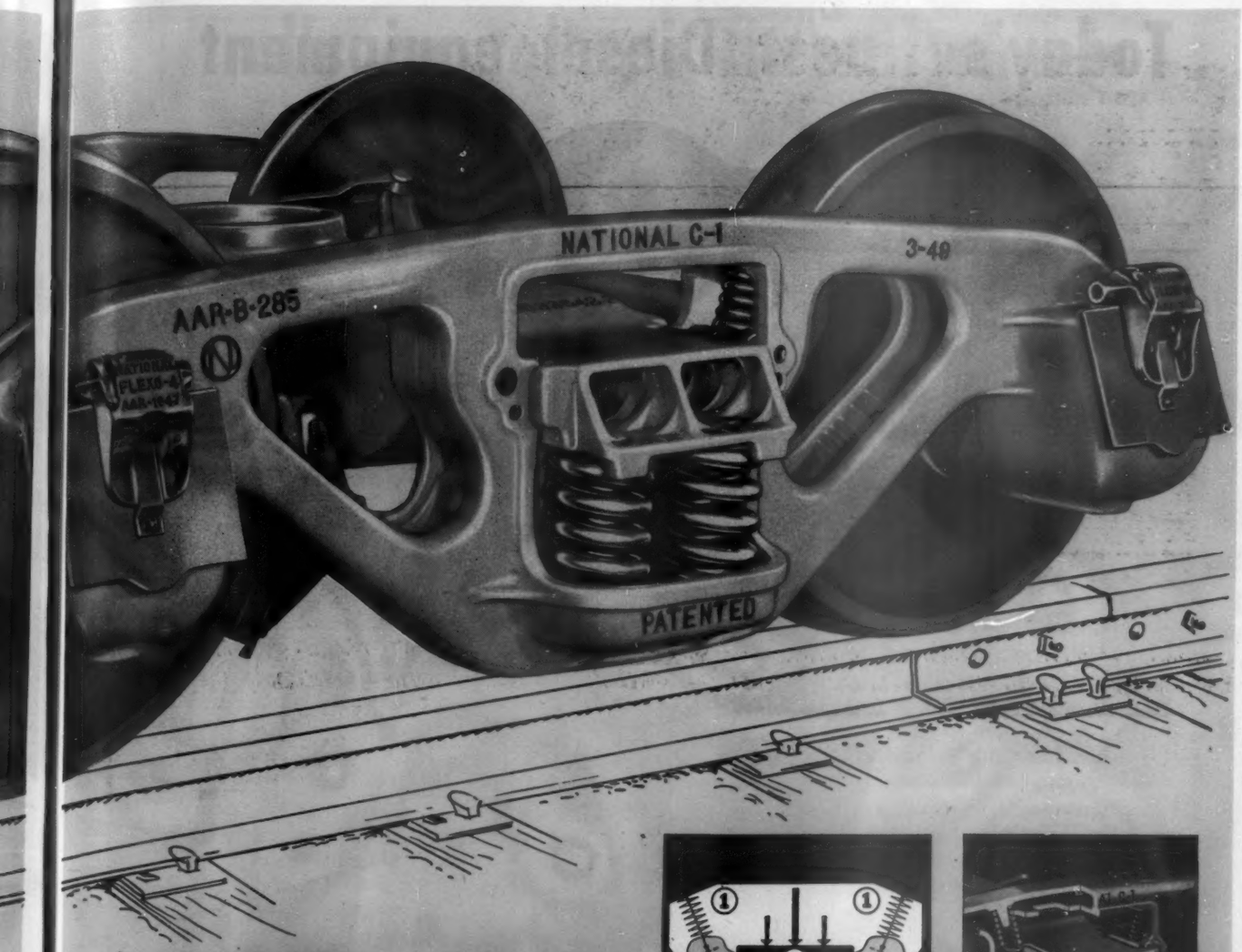


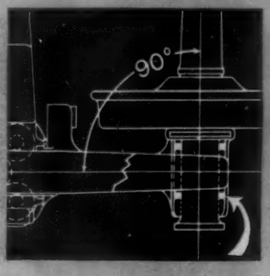
4 CHOICE OF SPRING DEFLECTIONS. C-1 trucks use A.A.R. Alternate Standard long-travel spring groups with 2½", 3 1/16" and 3 11/16" deflection . . . springs of 4" deflection may be used if desired.

Write for National C-1 Truck Circular No. 5150.

NATIONAL MALLEABLE and STEEL

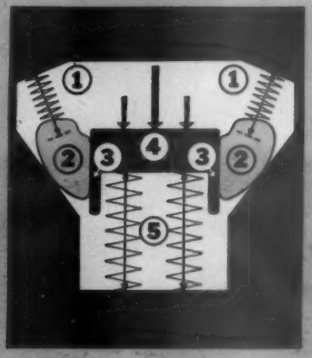
COUPLERS • TRUCKS • YOKES • DRAFT GEARS





5 JOURNAL BEARING LUG PROTECTION. Four journal bearing wedge aligning lugs in each journal box limit truck unsquaring, preventing breakage of journal bearing lugs.

6 FULL BOX-SECTION BOLSTER . . . Friction mechanism in side frame controls both lateral and vertical motion . . . permits full box-section bolster of maximum torsion and bending resistance.



INSIDE STORY OF A "LADING-CONSCIOUS" RIDE. Constant pressure of wedge springs (1) forces friction wedge (2) down side frame against bolster wear plates (3), providing friction to control the vertical and lateral oscillations of the supporting springs. Car floats on full box-section bolster (4) & standard spring groups (5).

The National Malleable and Steel Castings Company, Cleveland 6, Ohio

CASTINGS COMPANY

JOURNAL BOXES AND LIDS

NATIONAL *Products*

FOR TRANSPORTATION AND INDUSTRY

Est. 1868

Today's finest Diesel equipment

rolls on today's finest wheels . . .

U·S·S Wrought Steel Diesel Wheels

ON railroads all over the country, both large and small, Diesel locomotives have earned a reputation for superb performance, high earning power and round-the-clock availability. Many roads depend upon U·S·S Wrought Steel Diesel Wheels to help maintain this reputation. By matching the efficiency of the Diesel power unit with the superior dependability of U·S·S Wrought Steel Diesel Wheels these roads are assured longer periods of uninterrupted service and long-mileage safety . . . even at the breath-taking speeds demanded of today's transportation.

Extra-mileage U·S·S Wrought Steel Diesel Wheels are made from only uniform, high-grade steel that is carefully controlled in forging, rolling and heat-treating to assure a finished product that is highly resistant to the stresses of heavy wheel loads, torque and lateral forces.

U·S·S Wrought Steel Diesel Wheels can be furnished either rim toughened or entirely quenched—in diameters of 33, 36, 38, 40 and 42 inches. And, in order to serve you more promptly and efficiently, they're available from two strategically-located sources of supply: one at McKees Rocks (Pittsburgh), Pennsylvania, to serve the railroads of the East and Southeast, and another at Gary, Indiana, to supply Western and Southern roads.

For longest periods of service without enginehouse attention and stand-by losses, specify U·S·S Wrought Steel Diesel Wheels the next time you order. You'll soon see why they are the first choice of the country's finest locomotive builders.

UNITED STATES STEEL COMPANY, PITTSBURGH
COLUMBIA STEEL COMPANY, SAN FRANCISCO
TENNESSEE COAL, IRON & RAILROAD COMPANY, BIRMINGHAM
UNITED STATES STEEL EXPORT COMPANY, NEW YORK

U·S·S WROUGHT STEEL
DIESEL LOCOMOTIVE WHEELS

USS

O-1600

STATES STEEL

How Shippers Benefit from the Erie's Progressiveness

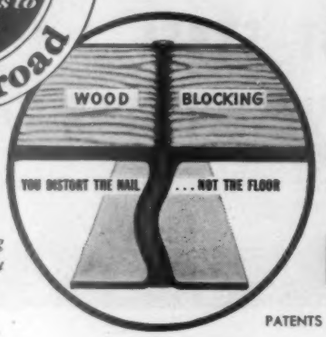
As a new century dawns for the Erie Railroad, its present management looks forward with vigor and vision.

Shippers recognize the Erie's progressiveness, for instance, when they see the NAILABLE STEEL FLOORING stencil on its boxcars and gondolas.

Shippers know that N-S-F and its exclusive nailing feature mean greater security for lading of all kinds—bulk, bagged, boxed or blocked. They know that N-S-F assures effective prevention of loss and damage claims plus greater all-round versatility of rolling stock.

ERIE 1851 100th ANNIVERSARY 1951 *Great Lakes to the Sea* Erie Railroad

The Erie is one of 40 progressive roads using N-S-F



Greater holding strength when you nail to N-S-F

GREAT LAKES STEEL CORPORATION
Steel Floor Division • Ecorse, Detroit 29, Michigan

PRODUCER OF N-A-X HIGH-TENSILE STEEL

NATIONAL STEEL CORPORATION

PATENTS PENDING

51-SF-8

HOW TO MODERNIZE CAR DUMPERS THE EASY WAY

The Lakefront Dock and R.R. Terminal Co. modernized and expanded its Toledo car dumper facilities to provide better service. It found that by ordering all its electrical equipment from one manufacturer it could place the responsibility and headaches of co-ordinated engineering and product delivery in a central location—it took advantage of G.E.'s project co-ordination system.

Lakefront's two modernized car dumpers and one new one were completely equipped with G-E motors, control, switchgear and allied apparatus, delivered as they were needed.

For your heavy construction work, ask your G-E representative to show you how G-E project co-ordination saves you time and money. General Electric, Schenectady 5, New York.

Shop Motors and Controls • Shop Testing Equipment • Undercar Power Plants • Lighting Systems • Electric Heaters • Signal Power Systems • Power Distribution Systems • Electric and Diesel-electric Locomotives.

GENERAL ELECTRIC

152-20

at the rate of 4,000 tons a minute!

Only America has a coal industry capable of turning out so much coal, so fast—at the rate of 4,000 tons a minute. That adds up to the tremendous total of *2 million tons a day!*

That's *twice* as much coal a day as all the British mines turn out.

That's *three* times as much coal a day as slave labor gets out of the government-owned mines of Communist Russia.

That's producing coal at a rate-per-man, *4 to 24 times* that in *any* country in Europe or Asia.

How can America's coal companies do it?

The productivity of American mines has climbed steadily with the ever-increasing use of machinery. Today, 98% of all American coal is mechanically mined—and about 75% is mechanically loaded. Today, output per man is more than 30% greater than in 1939! *This is one of the greatest efficiency increases in American industry.*

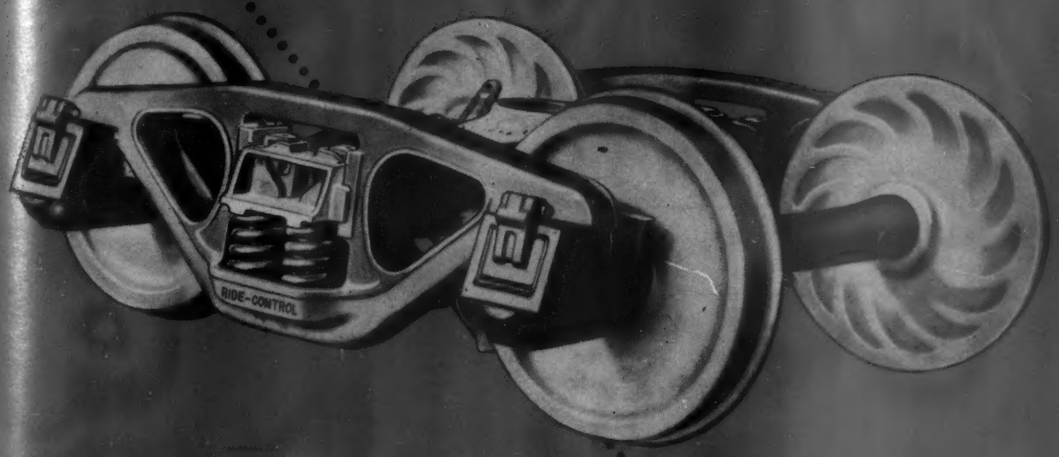
Not only do America's privately managed coal companies produce *more* coal—they produce *better* coal, too. Giant preparation plants now turn out a coal that, when used under an up-to-date boiler, yields *three times* the energy produced only a few years ago.

Now—when the job of rearming calls for more and better coal—the nation's privately managed coal companies are operating at the highest level of efficiency ever. *America will get all the coal it needs!*

BITUMINOUS COAL INSTITUTE
A Department of National Coal Association
WASHINGTON, D. C.

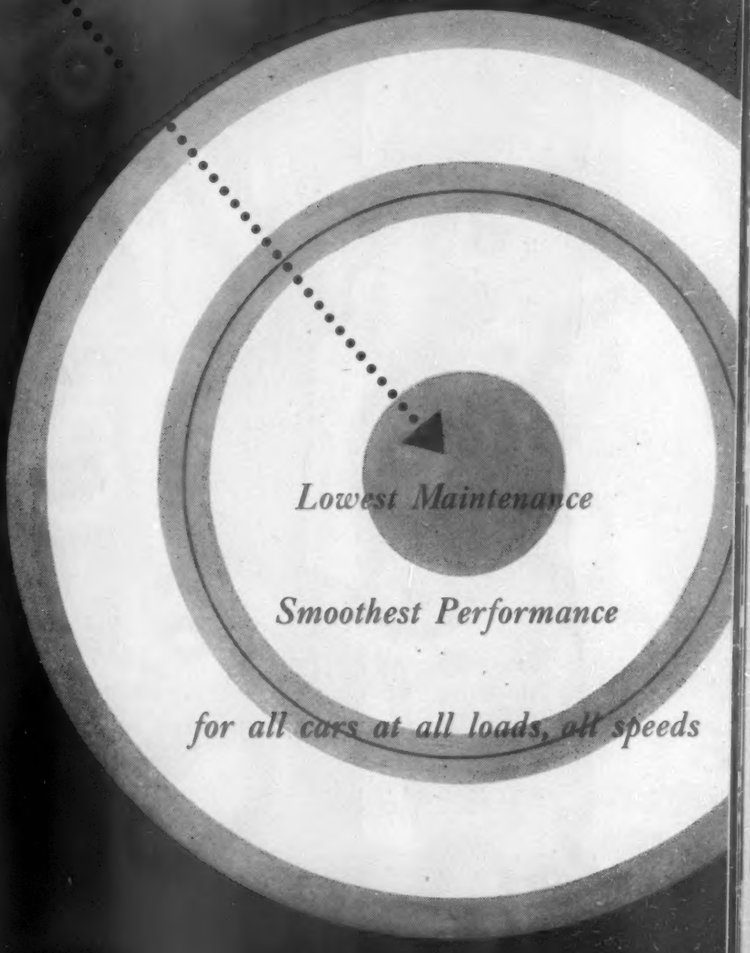
FOR NATIONAL DEFENSE FOR PEACETIME PROGRESS

YOU CAN COUNT ON COAL!



On-Target Design

makes the A·S·F Ride-Control® Truck a standout by every comparison



However you judge a freight car truck —by simplicity, fine riding qualities, or economy—you'll find Ride-Control at the top of the list, as it has been from the first.

So well does this modern, smooth-riding truck serve railroading's various needs that, today, it is specified in *far greater* volume than all other freight trucks combined.

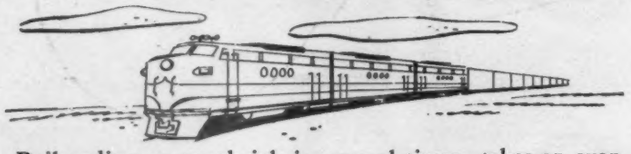
Billions of profitable, low-cost miles prove performance beyond all question . . . performance that proves the value to you of A.S.F. *objective* designing.

AMERICAN STEEL FOUNDRIES

Mint Mark of ⬡ *Fine Products*

TOUGH metals

for TOUGH jobs!



Railroading—a tough job in normal times—takes an even greater toll of equipment and operating time when schedules are stepped up to meet transportation emergencies.

Today, more than ever before, working parts of Diesel locomotives need the extra wear-resistance, the *extra* strength and toughness of alloy steels.

That's why you should talk to a Republic Metallurgist about *your* equipment. He will help you select the *right* alloy steel for each need—and help you establish the best way to fabricate and process it. Write us.

REPUBLIC STEEL CORPORATION
Alloy Steel Division • Massillon, Ohio
GENERAL OFFICES • CLEVELAND 1, OHIO
Export Department: Chrysler Building, New York 17, N. Y.

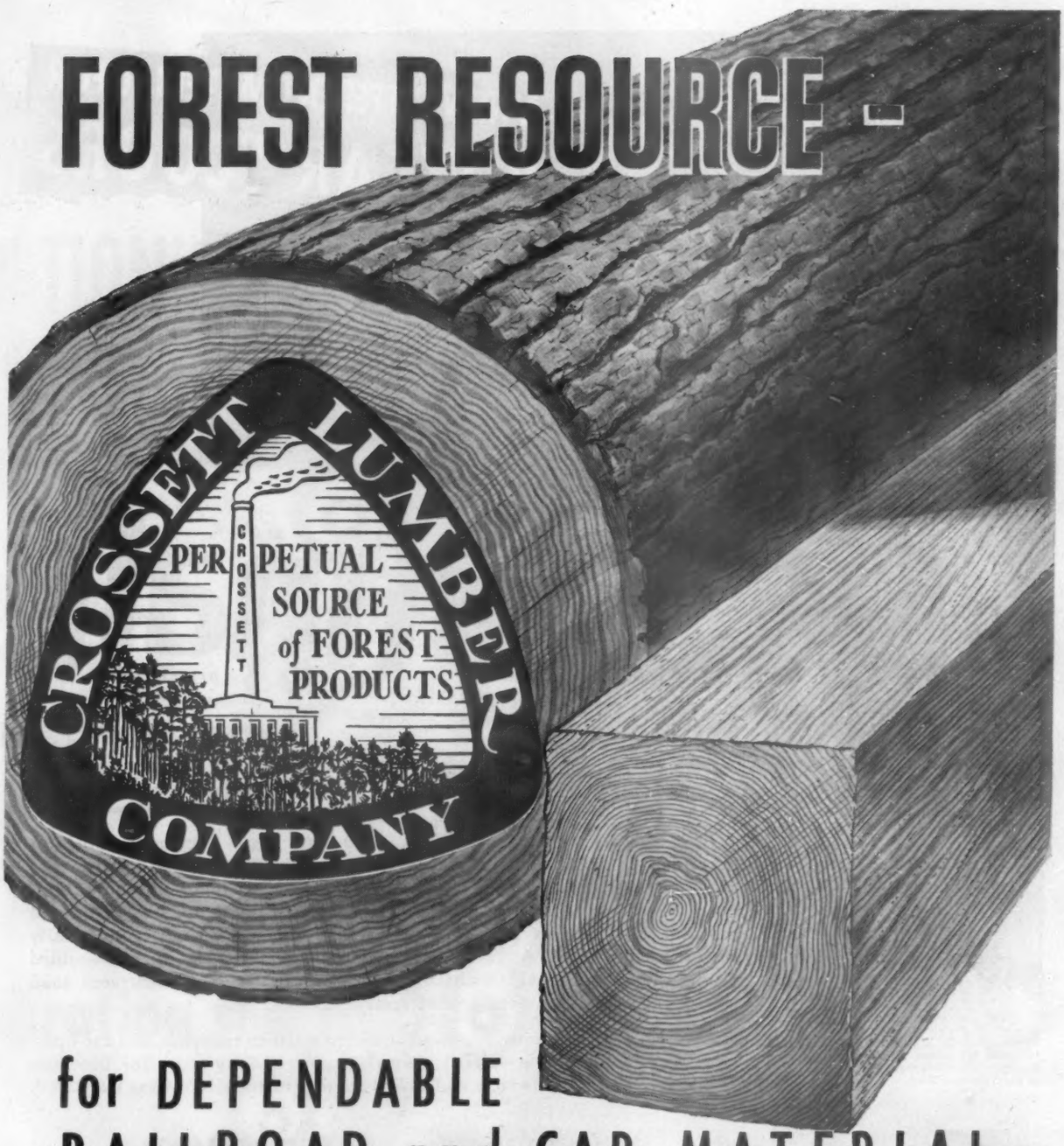
Connecting rods, wrist pins, gears, crankshafts, valve springs, bearings and other vital parts give longer uninterrupted service when made of alloy steels.

Republic ALLOY STEELS

REPUBLIC STEEL

Other Republic Products include Stainless, High Strength and Carbon Steels—Sheets—Plates—Pipe—Bolts, Nuts and Rivets—Boiler Tubes

FOREST RESOURCE —



for DEPENDABLE RAILROAD and CAR MATERIAL

- Stringers, Caps and Sills in Dense Shortleaf Pine
- Switch Ties in Oak and Gum
- Oak Freight Car Stock
- WOLMANIZED* treated and Creosoted Timbers

*Reg. U.S. Pat. Off.

CROSSETT LUMBER COMPANY

CROSSETT, ARKANSAS

A NEW DIFFERENT MATERIAL FOR BOXCAR FLOORS

TRADE Plastinail MARK

NEW OXYCHLORIDE CEMENT COMPOSITION

TOUGHER THAN STONE • SHOCK RESISTANT • NAILABLE AS WOOD

Condition of floor prior to installation of Plastinail flooring is not too important since material can be applied over any structurally sound floor.

The rough floor is first covered with saturated felt paper. A layer of reinforcing wire mesh is then nailed to floor to bond the new floor.

Side and end walls may also be covered to facilitate bulk loadings—the surface is nailable, easy to repair—simple to clean.

This hard, tough, shock absorbing boxcar flooring of cement composition is as *nailable* as wood. PLASTINAIL doubles the floor strength and makes floors last three times longer than wood alone. Plastinail smooth sealed-surface finish cuts abrasion damage claims two-thirds. Stops infestation and contamination. With PLASTINAIL, floors are easily and economically maintained in Class "A" condition—cars are readied for loading in one-third the time. PLASTINAIL withstands the hardest use . . . concentrated load weight is distributed over greater floor area.

Yes—PLASTINAIL provides flooring characteristics railroads and car operators have long sought—and it is available now. Write today for brochure which gives you all the facts about this amazing material. Address Dept. 000.

- **DOUBLES FLOOR STRENGTH**
- **STOPS INFESTATION**
- **REDUCES ABRASION DAMAGE CLAIMS BY TWO-THIRDS**
- **MINIMIZES CONTAMINATION**
- **ONCE OVER SWEEPING CLEANS IT THOROUGHLY**
- **APPLIED OVER ORIGINAL FLOOR LIKE CEMENT**
- **NOT AFFECTED BY HEAT, COLD OR MOISTURE**
- **BOXCAR FLOORS LAST 3 TIMES LONGER**

MANUFACTURER **F. E. SCHUNDLER CO., INC.** *LICENSER*

JOLIET, ILLINOIS LONG ISLAND CITY, N. Y.

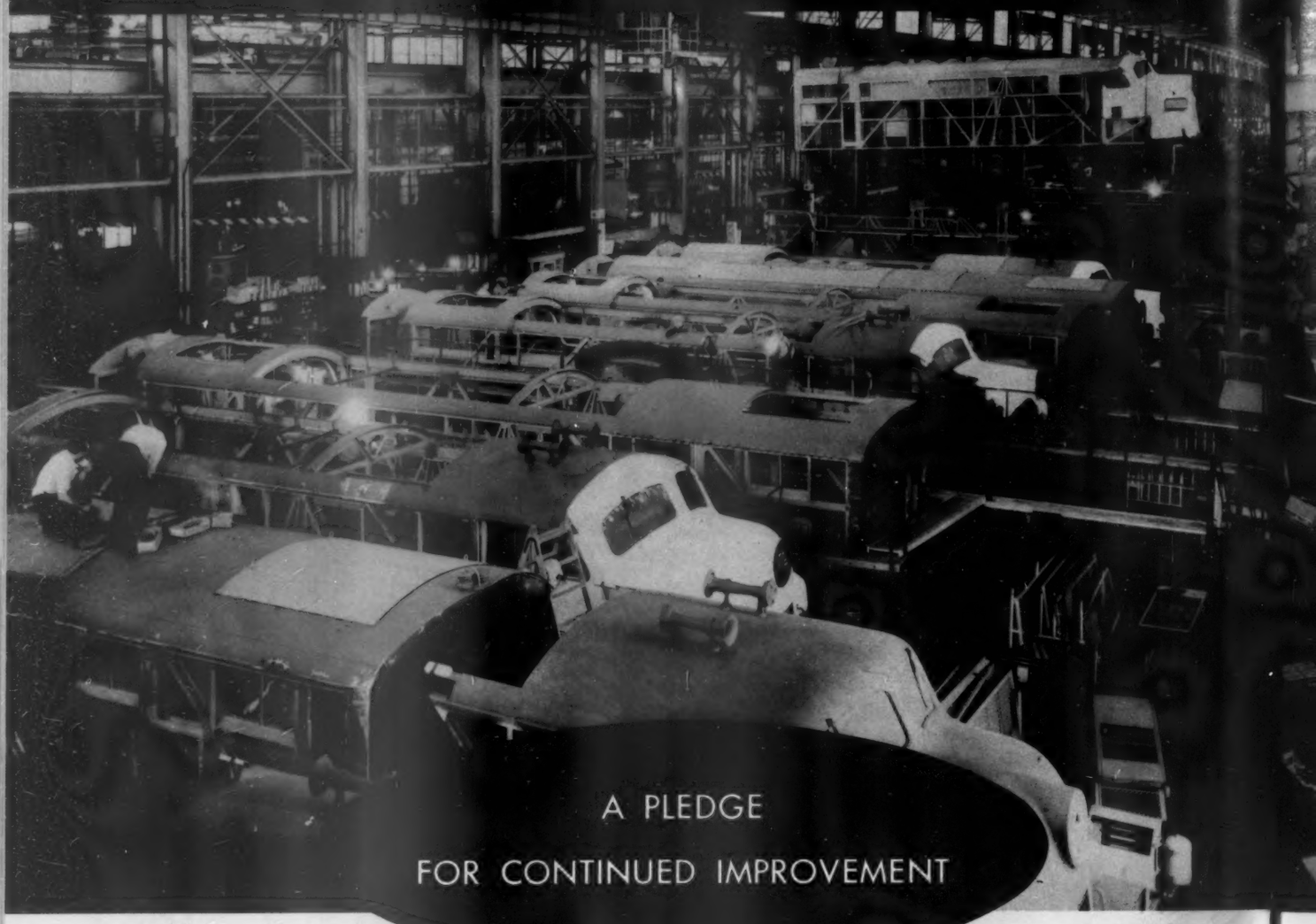
A PRODUCT DEVELOPMENT OF F. E. SCHUNDLER CO., INC. • DOW CHEMICAL CO.
WESTVACO CHEMICAL DIVISION OF FOOD & MACHINERY CORP. • WEYERHAEUSER TIMBER COMPANY

POWER FOR THE NATION'S LIFE LINES

Celebrating the 10,000th GM Diesel Locomotive

GENERAL MOTORS
LOCOMOTIVES

ELECTRO-MOTIVE, A POOL OF



A PLEDGE
FOR CONTINUED IMPROVEMENT

PRODUCTION of the ten thousand General Motors Diesel locomotive units is a landmark in Electro-Motive and national progress because of the improvements in transportation this motive power has made possible.

During its first decade the General Motors locomotive was developed to a high stage of performance in every field of standard gauge railroad service. During this time and through the last few years in which mass production methods and machinery were developed a great pool of experience, skills and facilities has been accumulated in Electro-Motive Division.

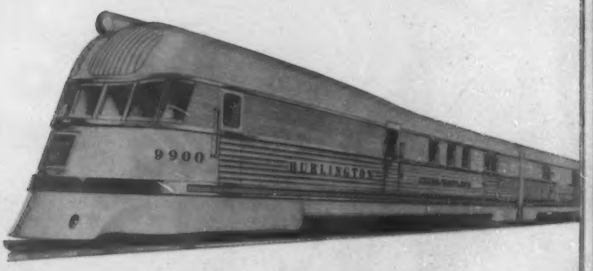
We view this outstanding record, made with the cooperation of the railroads, as a new base line of our responsibility to the men charged with continued improvement of railroad transportation.

We believe that the confidence expressed in us by the railroads, through their purchases of General Motors locomotives, imposes upon us the responsibility of keeping these skills, experience and facilities at work for them. We believe the railroads have the right to expect continued improvement in locomotive design and manufacturing techniques.

We have prepared this booklet to present a condensed review of the experience, skills and facilities with which we enter upon the design and production of the Second Ten Thousand.

Vice President
General Motors Corporation

OL EXPERIENCE, SKILLS AND FACILITIES

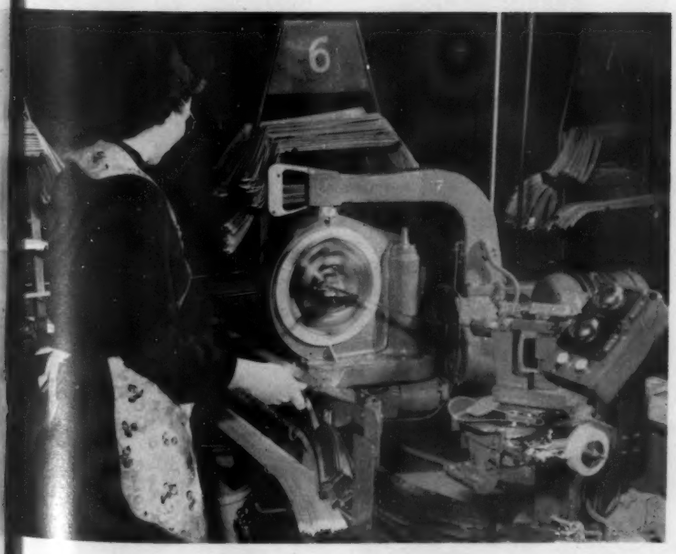


First to Successfully Apply the Diesel Engine to High-Speed Passenger Service

History was made early in 1934 when the first Diesel streamline train moved under its own power. The Diesel engine, freed at last of its shackles of excessive size and weight, moved onto the rails in ever-growing numbers to establish entirely new standards in rail transportation. Result of years and millions of dollars in research, the GM 2-cycle Diesel has been continuously developed into the far-famed 567 engine. Its reputation for rugged dependability in hundreds of millions of miles on the rails will be even further enhanced by developments now in progress.

Output of Diesels Increased by Mass Production Methods

All of Electro-Motive Division's long experience in locomotive manufacture plus General Motors skill in mass production are utilized to construct locomotives of top quality at the lowest possible cost. General Motors production men showed how to build Diesels in quantity by standardizing design instead of custom-building each job. They pioneered the subassembly technique in locomotive manufacture—and, equally important, they made parts interchangeable. With standardization, costs are lower, production is simpler, high quality can be maintained —and the savings are passed on to railroads in continuous improvements.

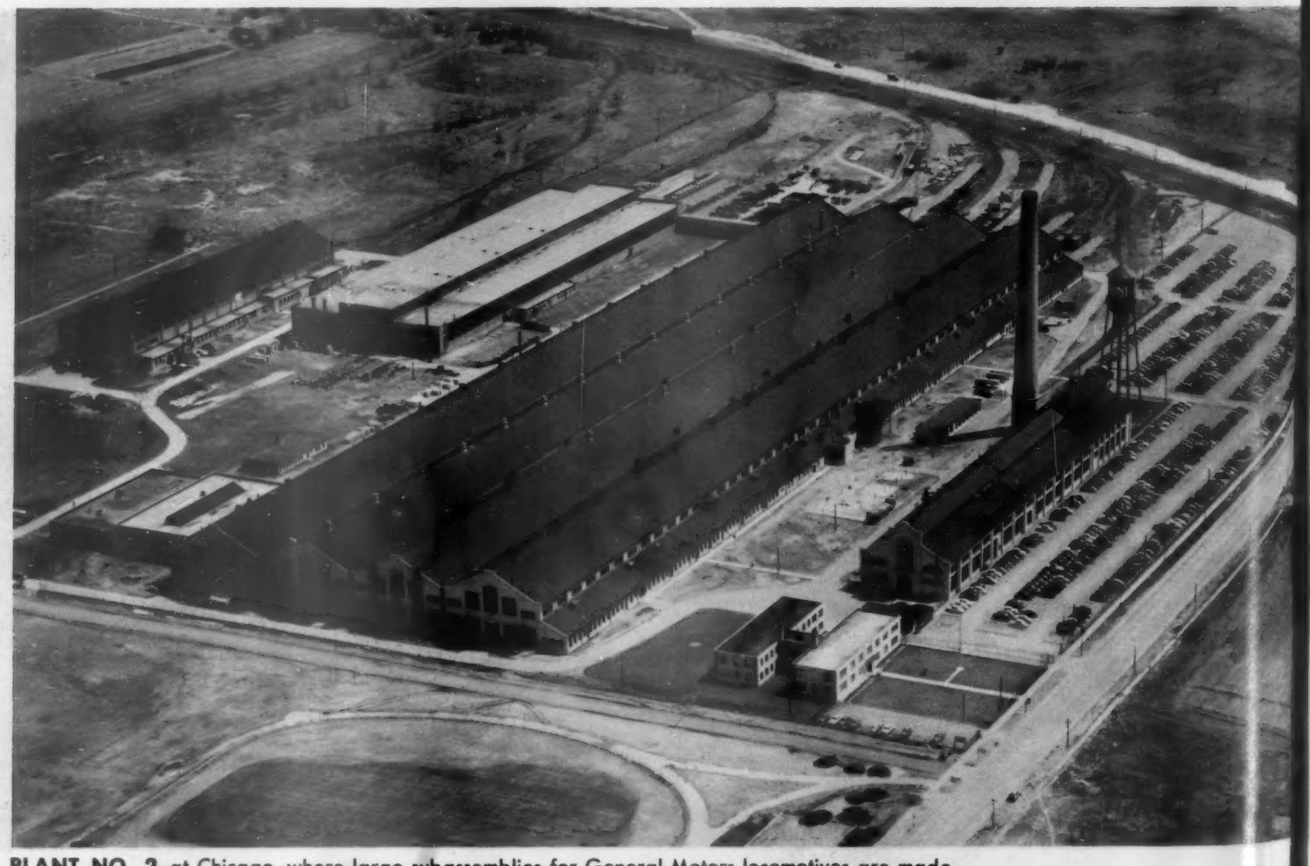


Constantly Improving Manufacturing Techniques

Production of more than 2,000 Diesel locomotive units per year calls for split-second timing and streamlined manufacture. Some 70,000 parts in thirty subassemblies flow into the final locomotive unit. General Motors production men conduct a continuous search for better ways to speed the flow of materials—to keep the complicated job running smoothly from assembly of raw materials straight through the manufacture of all components to the finished locomotive. Typical of the better tools and better methods is this automatic taping machine, designed and built by Electro-Motive to replace less efficient hand application of silicone tape to traction motor armature coil straps.

LONG-RANGE EXPANSION PROGRAM

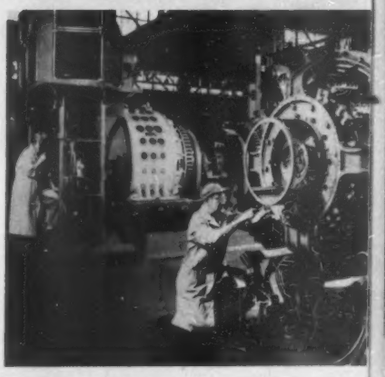
PLANT NO. 1 at La Grange, Illinois, where main line locomotives are manufactured.

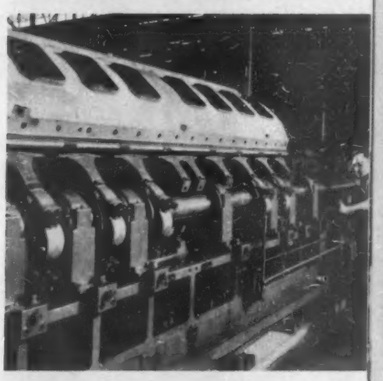


PLANT NO. 2 at Chicago, where large subassemblies for General Motors locomotives are made.

T[illegible]T VITAL NEED FOR RAIL POWER

PLANT NO. 3 at Cleveland, Ohio, where General Motors switching and transfer locomotives are manufactured.





Home of the Diesel Locomotive

General Motors Diesel locomotives have been produced at the Electro-Motive plant at La Grange, Illinois, since 1935. Birthplace of modern Diesel passenger and freight locomotives, this plant has now grown to ten times its original size. In the past four years, output of the expanded headquarters at La Grange has been augmented by the addition of subassembly manufacturing facilities in Chicago and the plant in Cleveland where General Motors switching locomotives are produced.

Here in these plants General Motors locomotives are built in their entirety—from rails to roof—including the fabrication and assembly of Diesel engines, car bodies, trucks, generators, traction motors and electrical control parts. This centralization of responsibility in *one* organization results in a balance of design, uniformity of high quality manufacture and parts and service follow-up that is unrivaled in the motive power field.

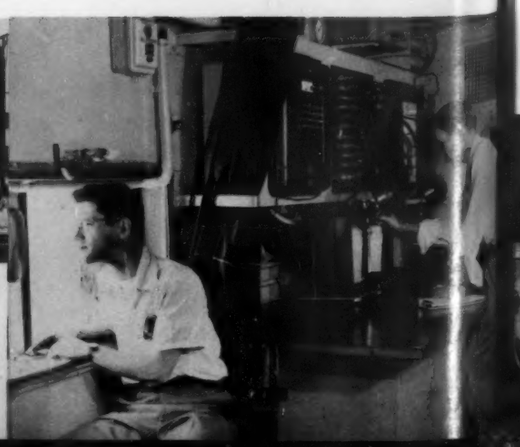
THE SEARCH THAT NEVER ENDS-R

LOCOMOTIVE DEVELOPMENT CENTER—LA GRANGE. This building provides Electro-Motive engineers with the industry's most complete facilities for continuous research and development.

IN THE LABORATORY General Motors technicians test engine performance with highly specialized electrical recording instruments, many of which have been developed by Electro-Motive. From these progressive studies come improvements in new products as well as in parts for older models.

Dynamometers at Plant 1 and Plant 3 are used for final testing of all finished locomotives. Tests are made on the treadmills under simulated road conditions at full load —a complete check of the locomotive before delivery to the customer.

Only institution of its kind in the industry, the Locomotive Development Center at La Grange, is the home of countless Diesel improvements and developments—among them, improvements in the Diesel engine, in traction motors and generators, in controls, in brake and cooling systems and many others, including easy accessibility of parts.



TESTS OF RAILWAY EQUIPMENT never before possible now are made as the result of the development of this Test Car by Electro-Motive. Instrumentation, devised mostly by Electro-Motive, makes it possible to obtain performance data under actual operating conditions that has been invaluable in improvement of locomotives.

DS-ROADENS WITH RISING VOLUME OUTPUT

Experimental model switcher undergoing tests at Plant 1.

A recent development is the new hydraulic drive switcher, an experimental model of which is pictured. This revolutionary 50-ton unit is powered by two GM 6-71 Diesel engines with torque converter drive direct to the wheels.

Another example is a new 6-wheel, three-motor truck for high speed service. It embodies improvements in riding ease and extra power that go beyond those already famous in trucks of Electro-Motive design. Development work of this nature is advanced by the rising volume of locomotive output.

Pushing Past Old Frontiers to New Horizons

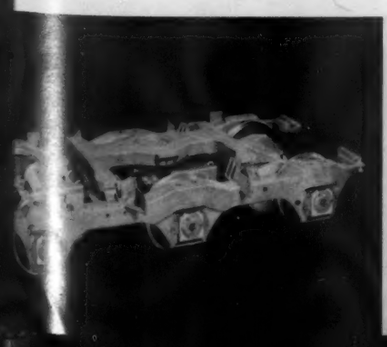
Backed by experience gained in the building of 10,000 Diesel locomotives, Electro-Motive engineers continually push to new horizons. The new clasp brake and reduced size dynamic-brake hatches are further evidence of the progressive work resulting from this endless search.

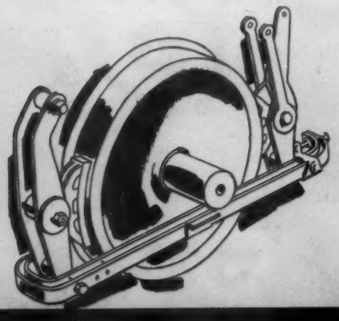
Gas Turbine Experimentation

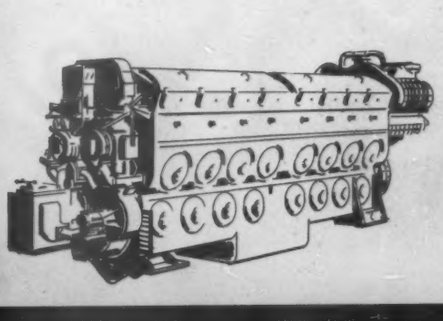
In cooperation with Allison Division of General Motors, which has built more than 10,000 turbine engines for American jet fighters and bombers, Electro-Motive experimentation in this field continues. The search is for higher, more compact and economical power for locomotives. Should the turbine engine ever prove its economic superiority over the present prime mover, it can be substituted for Diesel power in both old and new General Motors units.

Stepping Ahead with Diesel Engine Advancements

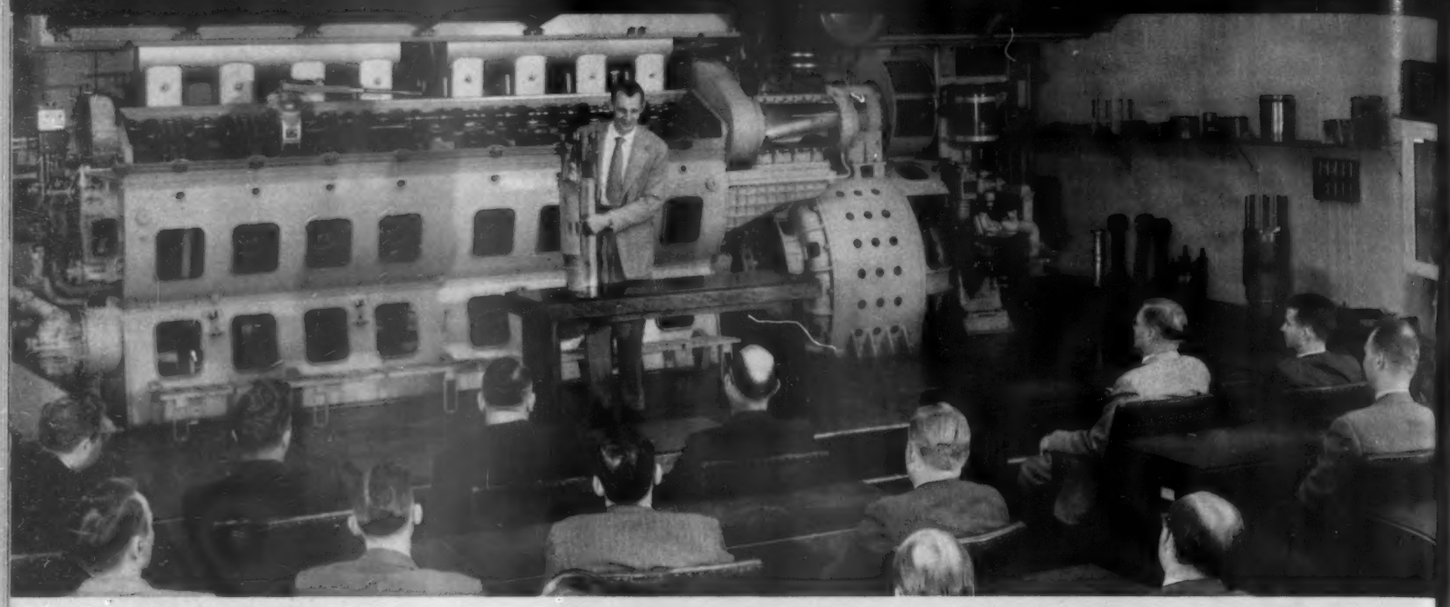
In the meantime, no expense is spared in continued refinement and improvement of the famed General Motors Diesel engine. Current developments include intensive work in metallurgy to achieve longer life of working parts, and design improvements to simplify manufacture and further reduce maintenance.





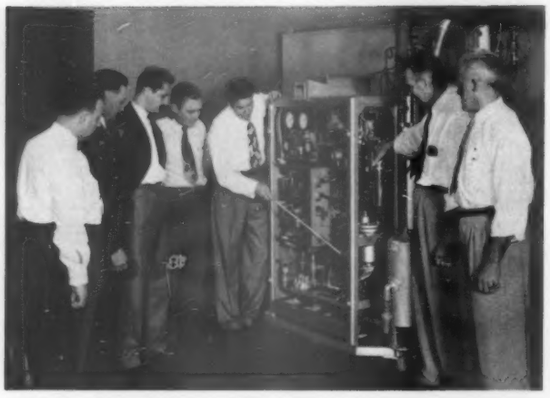


"TEACH THE TEACHER" PROGRAM ENLARGED



SPECIALIZED COURSES at the Diesel Locomotive Training Center in La Grange, prepare railroad instructors to set up schools in Diesel operation and maintenance.

(Below) **LIVE STEAM GENERATOR INSTRUCTION** is given to instructors during class session at the La Grange Training Center



Diesel Locomotive Training Center

To help railroads fill the urgent need for trained Diesel personnel, the Diesel Locomotive Training Center, La Grange, has further expanded its instruction facilities.

In addition to the basic two-week course, which more than 10,000 railroad men of supervisory status have already taken, Electro-Motive now offers an advanced 60-day course for railroad men who show special promise as instructors. Only four men take the course at one time. The men receive detailed instruction in all phases of reconditioning and maintenance and are taught how to make full use of the background material and instructors' aids which are supplied them. These men in turn are qualified to set up schools for their own railroads.

ELECTRO-MOTIVE OPERATES two Mobile Training Schools which have helped carry instruction to some 65,000 railroad employes. Inset shows car interior—classroom, high and low voltage cabinets, speed controls, steam generator, etc.

STEADY EXPANSION OF PARTS CENTERS AND FACTORY BRANCHES

★ LA GRANGE, ILL.
Parts Center and Rebuild Service
★ MINNEAPOLIS, MINN.
Branch Warehouse
★ ROBERTSON, MO.
Factory Branch and Parts Warehouse
★ EMERYVILLE, CALIF.
Factory Branch and Parts Warehouse
★ LOS ANGELES, CALIF.
Factory Branch and Parts Warehouse
★ FORT WORTH, TEXAS
Branch Warehouse
★ HALETHORPE, MD.
Factory Branch and Parts Warehouse
★ JACKSONVILLE, FLA.
Factory Branch and Parts Warehouse

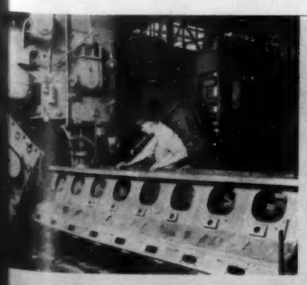
A growing network of seven strategically located parts warehouses—in addition to the well-stocked Parts Center at La Grange—assures a prompt supply of Electro-Motive repair and replacement parts. The stock at La Grange includes more than 35,000 different items for every model built. Modern, scientific packaging makes genuine General Motors Diesel parts easy to store, provides proper protection and helps reduce transportation costs. Electro-Motive adheres to a policy of engineering improved parts to fit old equipment as well as new. Thus, locomotives which have seen years of service can benefit from latest developments.

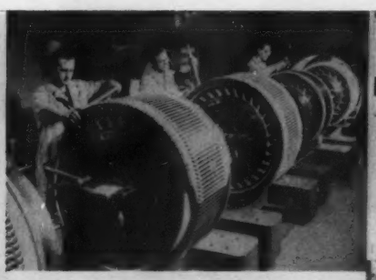
Factory Branch Rebuild Service Saves Time and Money

Electro-Motive Factory Branches at six strategic Centers not only save railroads the necessity of investing huge sums in rebuilding facilities but also turn out a quality of work obtainable in no other way.

These branch factories are completely equipped to rebuild principal components of Diesel locomotives with the same techniques and standards used in original manufacture.

Your nearest Electro-Motive Factory Branch maintains a pool of factory-rebuilt engines, traction motors, generators, injectors and other components available for immediate shipment on Unit Exchange.





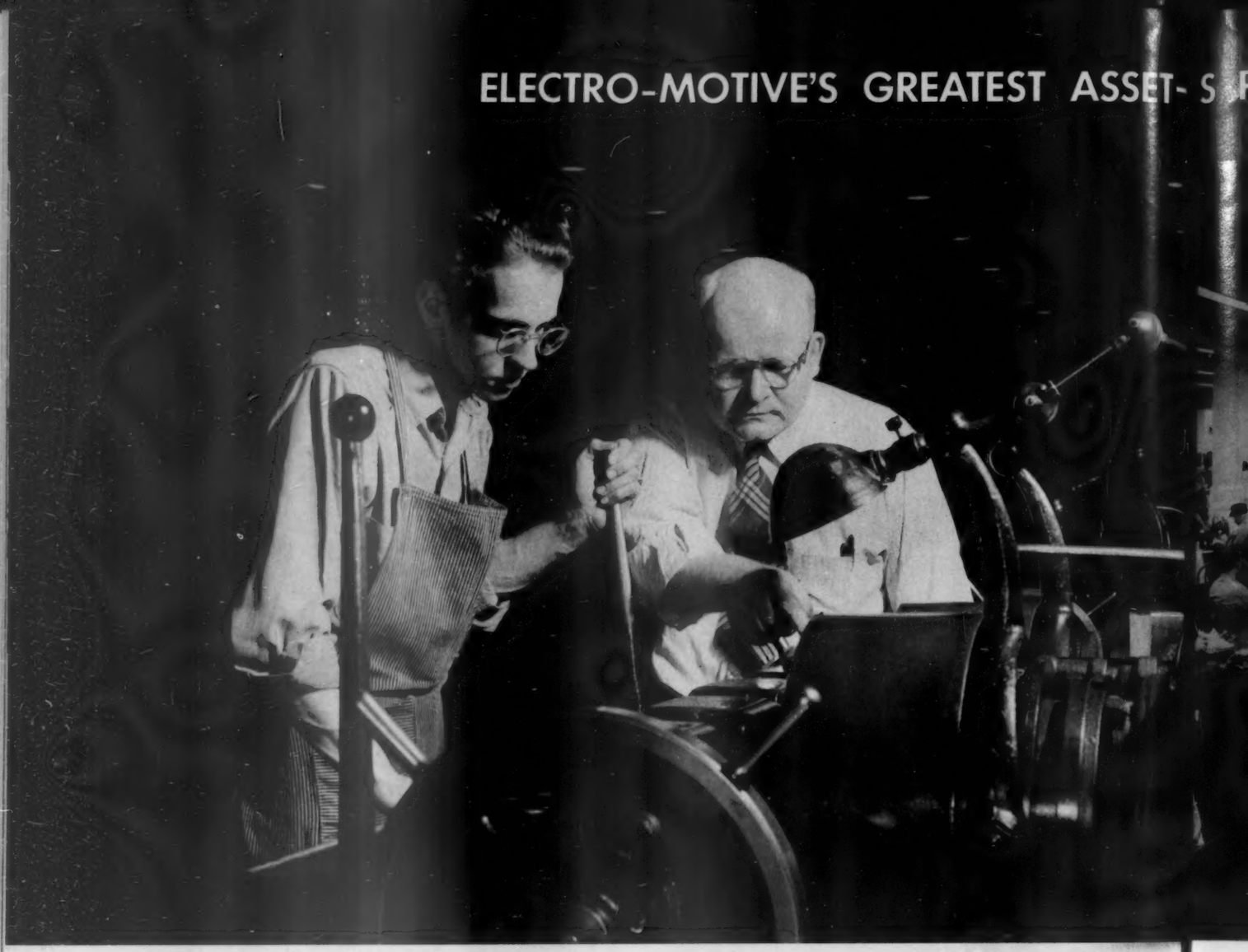
Giant machines like this are used to modernize crankcases sent in for rebuilding.

Generator rewinding is handled on production-line basis by factory-trained specialists.

Balancing traction-motor armature in Electro-Motive Factory Rebuild Service.

Interior of one of the six strategically located Factory centers.

ELECTRO-MOTIVE'S GREATEST ASSET- S



We have shown herein a few glimpses of the physical facilities and the methods evolved by Electro-Motive in its march to leadership in locomotive manufacturing. These factors are of undoubted importance. But there remains one whole realm of our leadership assets without which the buildings, machinery and processes would be inoperative and practically valueless. This overwhelmingly important factor is:

The People of Electro-Motive

Of the accumulated assets the greatest is the know-how and the personal skills that reside in the fifteen thousand persons who make up the EMD organization. Blast away our buildings and machinery, and our people will soon replace them.

Down through the years Electro-Motive has offered opportunities for personal satisfaction in doing work of national importance with unusual opportunity for personal advancement. This has attracted and held an unusually high type of personnel on bench, machine and desk. The Electro-Motive family embraces the more accomplished and stable people of the communities in the West Suburban and South Suburban areas of Chicago and the West Side of Cleveland. The same, although in smaller numbers, holds true of the Factory Branches at Robertson, Mo.; Los Angeles and Emeryville, California; Jacksonville, Florida and Halethorpe, Maryland.

To give some conception of the kind of people who make up Electro-Motive we present herewith facts from a recent study to find out something about the "average" Electro-Motive hourly rated employe:

ET- S PEOPLE

The Pool of Skill and Experience
From Which Flows the Productive Ability of EMD

ELECTRO-MOTIVE PEOPLE participate in many forms of recreations and hobbies.

A glance at the lapels of Electro-Motive men and women shows that 3,783 have received gold buttons for five or more years of service, while 2,058 have more than 10 years' service.

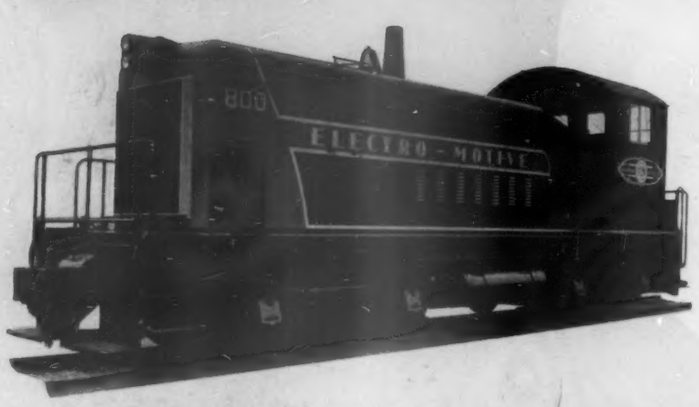
One of the reasons for our steady employment, reflected in the number of length of service awards we give each year, is that it is General Motors policy to promote from within wherever possible. More than 92 per cent of all Electro-Motive supervisory personnel have risen from the ranks of the hourly worker.

The average age of our hourly worker is 37. He has 2½ children. During the first quarter of 1951, he was earning in excess of $345 per month—well above the U. S. Industrial averages as a whole. He has three years of high school education, but plans more for his children. He is a church member.

He is buying his home and he owns an automobile. He carries an average of $3,000 in life insurance.

He takes an active part in civic affairs through membership in service clubs such as Kiwanis, Rotary, Lions, Boy Scouts, American Legion, Veterans of Foreign Wars and other community groups.

Growth in Class of Rail Service

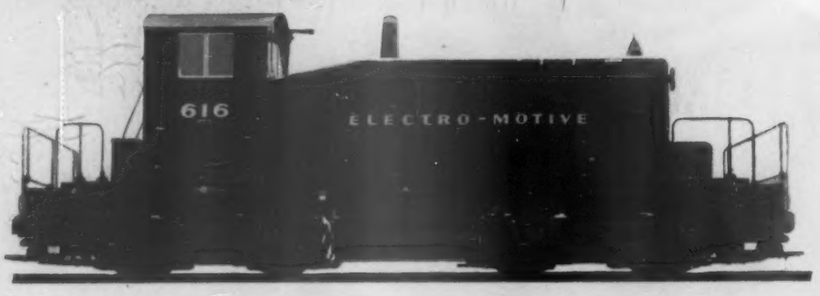


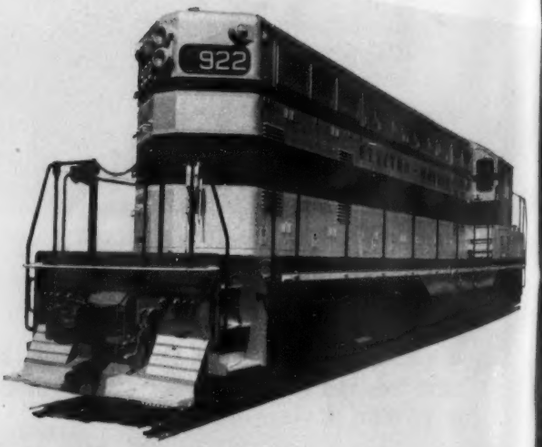
Electro-Motive Division covers the field of railroad motive power requirements with General Motors Diesel locomotives for every class of freight, passenger and switching service.

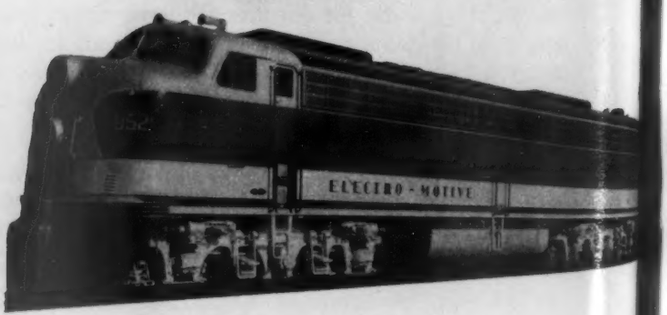
Standard General Motors Locomotives

600 H.P. Switching	1500 H.P. Passenger
800 H.P. Switching	2250 H.P. Passenger
1200 H.P. Switching	3000 H.P. Passenger
1600 H.P. Transfer	4500 H.P. Passenger
2400 H.P. Transfer	6000 H.P. Passenger
1500 H.P. Road Switcher	6750 H.P. Passenger

1500 H.P. Freight
3000 H.P. Freight
4500 H.P. Freight
6000 H.P. Freight







ELECTRO-MOTIVE DIVISION

GENERAL MOTORS GENERAL MOTORS LOCOMOTIVES LA GRANGE, ILL.

Home of the Diesel Locomotive

In Canada, GENERAL MOTORS DIESEL, LTD., London, Ont.

Litho in U.S.A.

Resident inspector (left) and general inspector (right) checking the records of a day's run in a chilled car wheel plant. The aim is uniformity from plant to plant in making every wheel as good as the best.

One of the duties of the AMCCW general inspector is to check all gages in use by resident inspectors against his master gages. Here he is seen inspecting the flange thickness gage. The chilled car wheels in the background are ready for shipment.

How inspection makes sure chilled car wheels can take it!

Every AMCCW wheel is tested for rotundity. The steel ring shown in photo must fit to .030" of perfection before the wheel is approved for service. If the wheel fails this exacting test, it must be ground to within .015" of perfect rotundity, or half the permissible limit.

Checking begins with the melt—even before an AMCCW wheel is poured. And never lets up until the wheel is okayed for use.

The AMCCW resident inspector in every AMCCW plant keeps elaborate records of every AMCCW wheel made... checks molding methods ... watches pouring temperatures... supervises rotundity tests... selects wheels for the daily drop and thermal tests. He is responsible, too, for all gages and pyrometers used in the plant.

In addition, a general inspector from Association headquarters spends a week every six months in each AMCCW plant, checking inspection methods and equipment, reviewing the records as shown above and checking all operating details that affect wheel quality, from the cupola to the shipping platform.

Accurate and detailed inspection like this, coupled with the new AMCCW wheel, with its heavier rim and stronger flange, means even higher safety records.

AMCCW

Low first cost
Low exchange rates
Reduced inventory
Short haul delivery
Increased ton mileage
High safety standards
Complete AMCCW inspection
Easier shop handling

ASSOCIATION OF MANUFACTURERS OF CHILLED CAR WHEELS

445 North Sacramento Boulevard, Chicago 12, Ill.

American Car & Foundry Co. • Southern Wheel (American Brake Shoe Co.)
Griffin Wheel Co. • Marshall Car Wheel & Foundry Co. • New York Car Wheel Co.
Pullman-Standard Car Mfg. Co.

OKONITE-OKOPRENE DIESEL ELECTRIC WIRING

PROTECTS against OIL FLAME MECHANICAL DAMAGE

These three qualities stand out in Okonite-Okoprene diesel electric wiring:

resistance to oil
resistance to flame
protection against mechanical damage

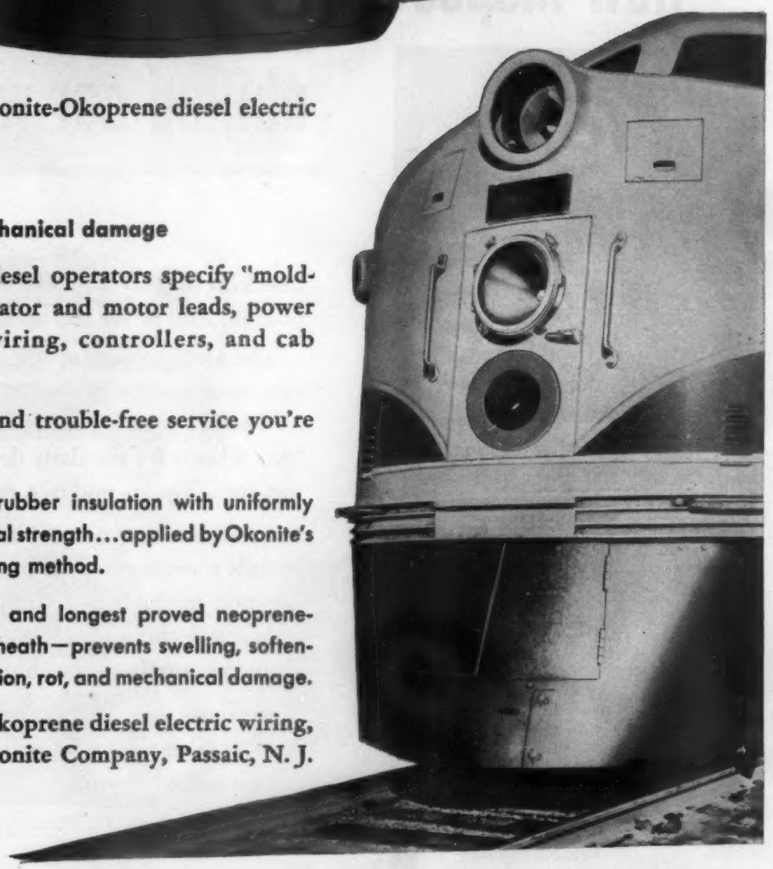
That's why a growing number of diesel operators specify "mold-cured" Okonite-Okoprene for generator and motor leads, power and control jumpers, headlight wiring, controllers, and cab signal circuits.

Here's the source of the long life and trouble-free service you're assured:

OKONITE INSULATION—long-aging rubber insulation with uniformly high electrical strength...applied by Okonite's strip insulating method.

OKOPRENE SHEATH—the original and longest proved neoprene-compound sheath—prevents swelling, softening, combustion, rot, and mechanical damage.

For full information about Okonite-Okoprene diesel electric wiring, write for Bulletin RA-2078. The Okonite Company, Passaic, N. J.



OKONITE SINCE 1878

THE BEST CABLE IS YOUR BEST POLICY

insulated wires and cables

WHAT TO DO ABOUT DESTRUCTIVE REGULATORY AND COURT ACTIONS

Recent decisions by the Supreme Court of the United States in cases involving railroads suggest that that body has lost its one-time ability, or perhaps desire, to evaluate day-by-day events in terms of fundamental principles. We refer to the opinions in the cases designated as *Alabama Public Service Commission et al. vs. Southern Railway, U. S. vs. Rock Island Motor Transport Company,* and *U. S. vs. Texas & Pacific Motor Transport Company* (see *Railway Age* of March 5, page 64, and June 4, page 66). The majority opinions of the court in these cases reveal an advanced stage of the disease known as "inability to see the forest for the trees."

In the Alabama Public Service Commission case, the court denied to the Southern Railway an injunction against the Public Service Commission for its refusal to permit the railway to suspend service of two unprofitable passenger trains. The court held that the railway should have sought relief in the state, rather than the federal, courts, despite the "diversity of citizenship" and despite the fact that a constitutional issue—violation of the "due process" clause—was raised by the railway. The Supreme Court did not deny that the federal courts could take jurisdiction in such a case—it threw the Southern's petition out on grounds which might be charitably characterized as whimsical. In doing so it uttered some "in passing" comment which seems calculated to render even more difficult than heretofore the railroads'—and the nation's—problem of getting rid of ruinously unprofitable services. The court said, for instance, that decision in these abandonment cases ought to depend, not on the fact of the trains' unprofitability, but "more upon the predominantly local factor of public need for the service rendered."

Passenger Service No Monopoly

Neither the Supreme Court of the United States nor the state Public Service Commission which it sustains appear to be aware of a fact patent to every observant citizen—namely, that there is not a passenger train operating in the United States today which serves the "public need" in the sense which every "accommodation" served a public need at the time when the regulatory authorities were given authority over abandonments of service. In those days, if a train did not run, the alternative was to walk or hire a rig from the livery stable. The railroads had a monopoly on all hauls of over ten miles or so. Nowadays, the railroads not only have no monopoly in passenger service, but have become a relatively minor factor in the total passenger traffic situation. Still, the regulators go on policing them rigorously for reasons which have vanished, and are sustained by a court which seems as meticulous in perpetuating anachronisms in restrictive detail as it is contemptuous of tradition when questions of fundamental principle are involved.

The *Rock Island* and *Texas & Pacific* cases involve application by the Interstate Commerce Commission to

two railroad-owned highway subsidiaries, which already held authorizations to engage widely in the trucking business, of the commission's recently developed and arbitrary policy of denying to such railroad-owned truck lines the right to engage in the trucking of shipments which do not move part of the way by rail. This policy is simply a crude and unimaginative device, concocted by the I.C.C. for some obscure and perhaps Freudian motive, to prevent the railroads from offering truck service of a kind which might seriously compete with that proffered by the independent highway operators. As was to be expected—the Supreme Court being what it is today—the I.C.C. was sustained in its restrictive policy, although four of the justices dissented.

The theory motivating both the regulators and the court in these cases—and, incidentally, all other cases where regulation is involved—seems to be that restrictions on managerial freedom are a desirable end in themselves, and are to be preserved whatever else befalls. Meantime the political and economic surroundings in which the railroads operate are changing rapidly, almost from day to day—and the organism which does not succeed in adapting itself to a changing environment is fated to join the dinosaur and the dodo. The regulators and the Supreme Court—not by intention, but by inattention—are doing their damnedest to prevent the railroads from conducting themselves realistically in their present surroundings, particularly as regards competition. The fact is that *every precept and practice of railway regulation which was adopted before highway, air and river transportation reached its present magnitude ought to be suspect.* The burden of proof should not be upon the railroads in seeking the elimination or mitigation of these restrictions, but on the regulators or anyone else who would seek to retain them. Transportation today is certainly as competitive as the steel or automobile businesses—and there is no reason in fundamental principle why the railroads should be subjected to any more restrictions than other large-scale enterprises.

What Will Impress the Courts?

Perhaps a way out of this impasse is suggested by the separate opinion of Justice Frankfurter, concurred in by Justice Jackson, in the Alabama case—in which Justice Frankfurter agreed with the court's decision but not its reasons. He pointed out that, in seeking to withdraw the two trains in question, the railway had "made no claim that it is operating at a loss, or is failing to receive a fair return, either on its total investment or upon its investment within the state of Alabama. . . . No showing whatever was made that by the loss incurred in running these trains Southern was deprived of that protection for its investment" to which it is entitled under the Constitution.

This paper does not claim competence to discuss questions of law from a professional legal standpoint. Quite likely, from such a standpoint, the establishment of the fact of loss by these two particular trains should have been all that was necessary to secure authority for their discontinuance. Nevertheless, it is quite evident that regulators, judges and legislators need education in the realities of the present situation of the railroads; in fact, Justice Frankfurter asked for it. So, might it not be well to consider the establishment of a standard practice in every case which comes before a regulatory body—and every railroad statement to legislators—to present a review of the fundamental factors bearing on the present transportation situation as a whole? Such a pattern might follow some such outline as the following:

1. The continuing need of the nation for railroad service—comparing average charges per ton-mile by rail and highway—and for common carrier service, establishing the fact that the railroads are the only genuine common carriers.

2. The inadequacy of railroad earnings to insure the continuance of railroad service under private financing (as irrefutably set forth in the study by Sidney Miller and Virgil D. Cover, of the University of Pittsburgh and Syracuse University, respectively, as outlined in these pages in our April 9 issue).

3. The contribution of restrictive regulation and arbitrary favors to rival agencies of transportation as the principal cause of the adverse condition set forth in Item No. 2.

4. How the particular case at issue forms a part of the deadly restrictive process outlined under Item No. 3.

If every restrictive move against the railroads—including restrictions on freedom in making rates and in meeting competition—were thus interpreted to the regulators and judges, and ultimately to the public, in terms of the selfish public interest, might it not ultimately be expected that regulatory and judicial decisions would tend to become more realistic? When we had courts which were alert to fundamental principles—such as permitting the regulation of monopolies but not competitive enterprises; quick to repel conspiracies in restraint of trade, and to enforce the "due process" clause—it was not necessary to carry questions of law to the populace in order to get decisions in conformance with the public interest. Those times have passed. Recognition of this change, and action accordingly, may be a test of survival.

CHARACTERISTICS OF THE CHIEF EXECUTIVES' ROSTER

Following publication in these pages (issues of April 23 and May 28) of data on the average age, education and other characteristics of persons holding the position of division superintendent, the suggestion was made that similar information be shown for other key positions in management. In partial response to this proposal, the following tabulation gives the data on the chief executives of the 36 "large" railroads, 1940 and 1950 compared:

	1940	1950	% of Change
Per cent Age 54 or Less	8	19	+130
" " " 55 - 59	25	19	− 22
" " " 60 - 64	31	17	− 45
" " " 65 - 69	25	28	+ 11
" " " 70 or More	11	17	+ 50
Arithmetic Mean Age	62	62	....
Per cent College Educated	56	44	− 20

It will be noted that, while the (arithmetic) average age did not change after the lapse of ten years, the ratio of younger men (i.e., those below 55) in chief executive positions showed a sharp increase—while lesser but noteworthy increases were also shown in the two age groupings above age 65.

Of the chief executives in 1940 whose biographical data revealed college education, 60 per cent had attended engineering schools while 20 per cent had straight "academic" backgrounds and the other 20 per cent had been educated in law. One of the number had degrees in both law and engineering. In 1950, a smaller ratio of the total number had college education—and, of this number, only 50 per cent were engineers—31 per cent having been schooled in "academic" subjects and 19 per cent in the law.

The careers of these executives show conclusively that there is no exclusive "route" to the top job. The operating department produced almost half of the 1940 total and more than half of the 1950 group—but other departments were well represented, including engineering, accounting, mechanical, purchases, law, finance, traffic, and administrative. The number of chief executives drawn from the traffic and financial departments showed a marked increase in 1950 as compared with ten years earlier. Perhaps of special significance was the fact that, in 1940, 11 per cent of the chief executives had moved into the railroad business at or near the top from "outside" the industry proper—while, in 1950, over 16 per cent of the total number had thus been drawn in from the "outside."

A COMPLEX ENGINEERING PROBLEM

In an article on another page in this issue a year's progress in the development of the coal-burning gas-turbine locomotive project of the Locomotive Development Committee is briefly reviewed on the basis of a report presented before the Midwest Power Conference in April. The Locomotive Development Committee, representing a group of bituminous coal-carrying railroads and bituminous coal-mining companies, was organized in 1944 and the project of finding a means of burning pulverized coal in a gas-turbine locomotive power plant got under way.

This project is an outstanding example of the application of the engineering method to the solution of a major power application problem. The engineering method consists first of the analysis of the project into its elements, each of which then constitutes a problem relatively free from complexities, the solution of which may be undertaken by means of research or the adaptation of methods established in other applications. With satisfactory answers to each of the elements entering into the overall project, the final step is a synthesis which adapts and coordinates these answers so that, together, they accomplish the overall purpose of the project.

The problem of developing a means of burning pulverized coal as the source of energy for the gas turbine seemed like a relatively simple one at the outset. Each element in the problem was one concerning which there was a background of experience in applications other than the gas turbine as a locomotive prime mover. During the past five years, however, the specific conditions imposed by the gas-turbine locomotive application have demanded refinements and extension of the limits beyond those set by current experience. The problems have included the satisfactory preparation of pulverized coal on the locomotive, the accurate metering of pulverized coal as the primary means of throttling control of the locomotive power, feeding pulverized coal from the atmosphere into a stream of air under pressure, the maintenance of combustion at high efficiency in extremely limited space, and ash removal to protect the turbine blading from destructive erosion.

The solution of each of these problems has now reached a status such that the synthesis of all of these elements into a locomotive power plant has been undertaken. While the project, which at the outset it seemed might be carried out within a year or two, has run on for a matter of six years, no inherent obstacle to ultimate success has yet come to light. While progress has been slow, only one step remains in the development process before a locomotive is actually built for railway service; that is, the completion of the tests now under way on the power plant as applied to locomotives.

As a physical development, the ultimate success of the locomotive seems highly probable. Its success as a unit of railway motive power will ultimately be determined on the economic level.

Much of the criticism being heaped upon the railroads because of the current car shortage is undeserved. No one is directing the same harsh criticism at the steel industry, for instance, because it can't meet suddenly the demands of military requisites piled up on top of great civilian orders. The meat industry is not being abused because of shortages resulting from inflated public purchasing power, nor is the airplane industry blasted because it can't turn out overnight the war planes called for. The car shortage is serious, is likely to continue for some time. It is something to cause embarrassment, but the railroads needn't be shame-faced about it. Nor is it the largest in history, as some assert. And finally the lines are trying to do something about it, as is proved by the fact that they have 160,000 freight cars on order, the greatest number at any one time in their history, after having purchased 340,000 since the end of the war. The railroads are suffering from war-time growing pains just like every other key industry. They can't hurdle from a peacetime pace to a war footing without difficulties like those being experienced by other industries in transition. The difference is that the railroads are a spotlight industry.—*Railroad Co-operative League of Michigan*

Fluorescent lighting, stainless steel, and a harmonizing color scheme transform platform of Hudson & Manhattan's Grove Street station into a "daylight"-bright, easy-to-maintain area. Directional signs on walls and suspended over platform, together with the distinctive color scheme of the station, tell the traveler where he is and the destinations of trains

What H. & M. Is Doing to Its Stations

Featuring stainless steel, liberal use of color, glass, new lighting, and moving stairways, the Hudson & Manhattan completes the first of a series of station modernization projects

The transformation from one of the oldest and least attractive stations on the line to one that embodies the latest concepts in passenger station design—that's what the use of modern materials and techniques, featuring stainless steel, accomplished for the Grove Street station of the Hudson & Manhattan in Jersey City, N. J. Add the elements of advanced industrial design, and the result is speedier, brighter, more cheerful and comfortable commuting for passengers, as well as more efficient and economical housekeeping for the railroad.

The Grove Street station — on two levels with the train platform underground, 24 ft. below the street entrance — was recently modernized from top to bottom in the first of a series of similar projects that ultimately will extend to all stations of the H. & M., which, by a system of tunnels under the Hudson river, links New Jersey with New York City. Embracing the front entrance, the street level, the stairs, and the platform itself, the improvement program, by careful scheduling of the work, was carried out over a period of five months without interruption to either passenger or train movements.

Planned by Henry Dreyfuss, industrial designer who is known for his styling of the New York Central's "Twentieth Century Limited," in collaboration with H. & M. Vice-President John R. Grove, the improvement program has given the station a specially designed system of fluorescent lighting, a set of twin Motorstairs (moving stairways), and stainless steel sheeting on platform pillars, change booth columns, and on the wall areas of a

The improvements made in the street-level portion of the stations are illustrated by these before-and-after views. That at the left was taken before the work was done while that at the right shows a portion of the same area as it appears today. Below—Placing the lunch-stand concession in the center of the station made it possible to increase the counter area. The face and top of the counter are of Micarta with stainless steel trim

Before modernization, the old three-lane conventional fixed stairway (left) was a point of congestion during rush hours. With the installation of twin moving stairways (right) flanked by new fixed stairways, pedestrian flow is speeded up in both directions. Note new wall and lighting treatment and the modern turnstiles

newsstand and a lunch-counter concession. The station has a basic identifying color—green—and bands of this color run along the tunnel walls at window level so commuters can quickly recognize their stop. Various permanent fixtures are painted in harmonizing colors. Carrying out this "color identification" scheme, other stations along the line have each been assigned different colors to be applied when their turn for face-lifting comes up.

Special Treatment for Columns

To overcome the upkeep problem caused by the relatively high humidity encountered in underground train stations, stainless steel was used to cover the 50 supporting pillars that extend, in two rows, from one end of the platform to the other. All of these 20½-in. by 20½-in. columns are encased with 20-gage No. 4 standard-polish Type 302 stainless sheets.

Four sheets are used to encase each column, and each sheet is formed to the contour of a quarter section of the column. These sheets have ¼-in. deep, 90-deg. V-shaped notches formed at intervals of 2 in. to provide rigidity and to give a decorative effect. The sheets, which overlap slightly at the centerline on each face of the column, are fastened to the column with flat-head stainless steel screws driven into lead expansion plugs.

To provide a solid backing and a panel surface which could not be easily dented, tempered ¼-in. Masonite strips were placed behind the stainless-steel sheets between the V's, and cemented to the columns. The joints provided by the interlocking V's at the edges of the panels were soldered. This method of affixing the covering to the pillars offers assurance that the panels will not be shaken loose by the constant vibration encountered at the train level.

Turning the 450-ft. platform into "daylight" brightness —eleven times brighter than conventional platform lighting—was accomplished by placing two rows of fluorescent light tubes end-to-end the length of the platform. These fixtures are mounted on an enameled metal panel suspended from the ceiling above the center of the platform. Left exposed to provide maximum light and to afford ease of maintenance and cleaning, the tubes bathe the entire platform area with an average light intensity of 27.6 footcandles, as compared with the 2.5 footcandles afforded by the old incandescent lights. Requiring only 8 per cent more wattage, this system of lighting not only contributes toward a pleasing effect and more comfortable reading, but also increases safety at trainloading times.

Passengers entering the station from the street have a direct line of travel from six new doors, past the change booth and lunch stand, to the turnstiles and the Motorstairs leading down to the platform. Located in the center of the station, the glass and stainless-steel change booth, replacing an old-fashioned conventional type, is equipped with mechanical changers and is electrically heated and ventilated. Glass windows, supported by vertical members covered with stainless steel, enclose all sides of the booth. Twenty-gage stainless steel sheets are also wrapped around the column forming a part of the booth and are applied with no visible fasteners.

This general scheme is carried out in glass-covered display cases with stainless-steel frames, which are placed along the walls of the entrance area. All visible interior walls of the redesigned lunch stand, important work and service areas, the pie case, and a center island housing the refrigerator and dishwasher are covered by stainless steel sheeting.

Traffic Flow Speeded Up

The turnstiles are of modern design with stainless-steel tops and snap-on moldings in keeping with the general design features of the station. After passing through the turnstiles travelers have a clear path to the set of twin moving stairways which are equipped with the most effective safety devices. Use is made of stainless steel on the railing caps around the well of the moving stairways. During the evening rush hour both stairs move up to accommodate home-coming commuters, while at other times they move in opposite directions. Standard fixed stairways are located on either side of the moving stairways to handle traffic going against the rush-hour crowds. The whole stair area is lighted by twenty-three 150-watt floodlights.

Coal-Burning Gas-Turbine Moves Ahead

By JOHN I. YELLOTT, PETER R. BROADLEY, and FREDERICK D. BUCKLEY*

Feed control, combustion and ash removal advanced on Dunkirk experimental plant—Full locomotive plant now installed for test

[This article is taken from the progress report presented on April 6 at the Midwest Power Conference, Chicago. The first part of the report reviews the results of 1,000 hours of operation of the experimental turbine plant at Dunkirk, N. Y., described in a previous report before the Midwest Conference of 1950 (see "The Experimental Coal-Burning Gas Turbine," by John I. Yellott, page 59 of the April 15, 1950, *Railway Age*). The progress report describes the coal preparation system, the feeding and control of fuel to the combustors, the combustion system, and the ash-removal system. The various steps in the evolution of the ash-removal system as it is being used in the test installation of the Allis-Chalmers locomotive turbine are set forth, and experience with blade erosion during this period is also described. With the final separator modifications most of the plus 20-micron particles and all but 10 per cent of the plus 10-micron particles are being removed. Under these conditions, during the fourth 250-hour test no measurable erosion of the cylinder blading and no visible change in the wear of rotor blading was observed, and the fine ash is now uniformly distributed throughout the turbine. The text of this article is confined to the second part of the report which describes the test installation for the Allis-Chalmers locomotive turbine now set up at Dunkirk.—Editor.]

The Locomotive Development Committee of Bituminous Coal Research, Inc., has now operated a full-scale Houdry process gas-turbine with coal as its primary fuel for 1,000 hours. As a result of this experience, combustion and ash removal equipment has been constructed, with which a 4,200-hp. Allis-Chalmers locomotive-type turbine will soon be in operation on a stationary test bed at Dunkirk, N. Y.

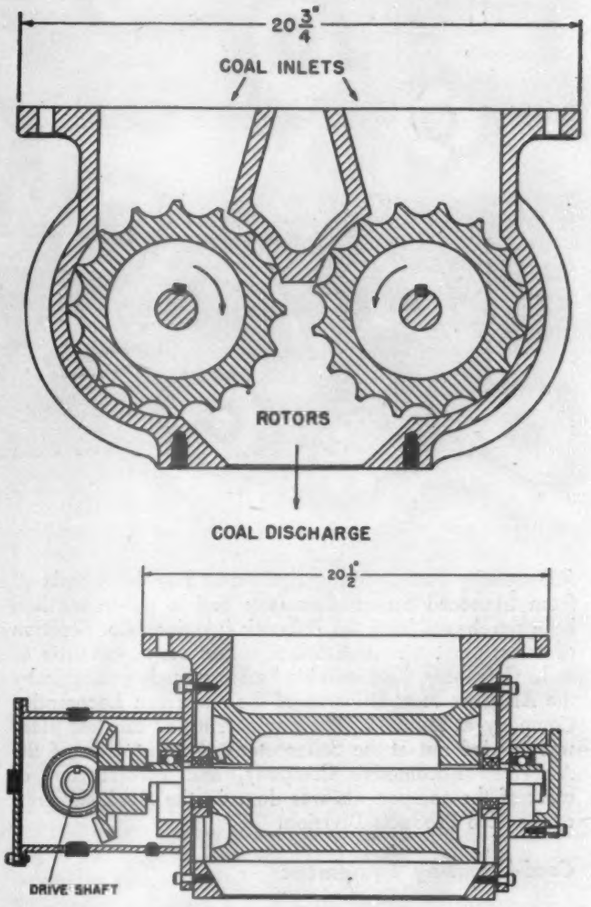
Operation of the Houdry turbine on a direct-fired open-cycle has demonstrated the feasibility of feeding pulverized coal into a combustion chamber which runs at 45 to 60 p.s.i.a. Equipment for continuous removal and discharge of the resulting ash has been developed. Blade erosion has been largely confined to the stationary blades of the experimental turbine and to regions of the turbine where the unremoved ash was apparently concentrated by centrifugal forces in the inlet piping. Extent of erosion depends upon dust concentration and upon particle size. There are strong indications that minus 10-micron particles are relatively harmless. Particles larger than 25 microns (.001 in.) in diameter are capable of causing severe erosion and must be removed in order to prevent damage to turbine cylinder blades.

Tests with Locomotive Turbine

The objective of the Locomotive Development Committee's program has always been to produce a coal-burning gas-turbine locomotive which could be used to demonstrate the feasibility of this kind of power plant. After the first year of the program, the committee felt that there was enough hope of success to warrant the purchase of a full-scale gas turbine. Contracts were placed both with Allis-Chalmers and Elliott for the construction of 3,750-hp. locomotive-type turbine plants with traction generators and all necessary control equipment.

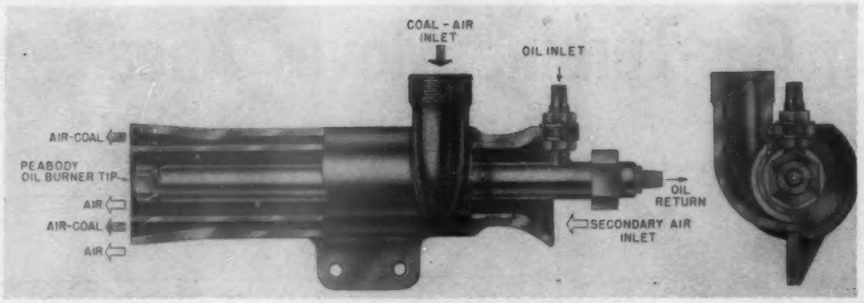
Construction of the two turbines proceeded in parallel with the development work which has been described in previous Midwest Power Conference presentations. Delays in the research program were closely paralleled by delays and unexpected problems in the designing and building of the two power plants.

In the fall of 1950 enough experience had been accumulated with the Houdry turbine to justify the belief that the locomotive turbines could safely be operated on pulverized coal. Acting as always on the optimistic assumption that the problems would be solved as they arose,

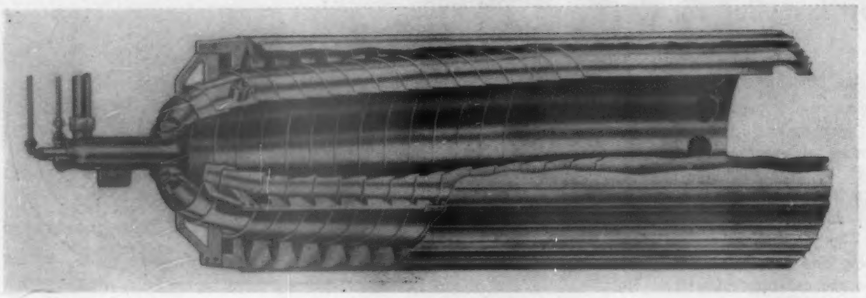


The Rotolock pulverized coal feeder, built by the Omega Machine Company, and controlled by an Oilgear hydraulic transmission, is in use on the locomotive turbine test plant

*John I. Yellott, director of research, and Peter R. Broadley, assistant director of research, Locomotive Development Committee, and Frederick D. Buckley, manager, Research and Development Division, L.D.C. Project, American Locomotive Company.



Dunkirk annular burner for pulverized coal, with a Peabody wide-range oil burner located in the center of the secondary air passage



The L.D.C. film-cooled combustor

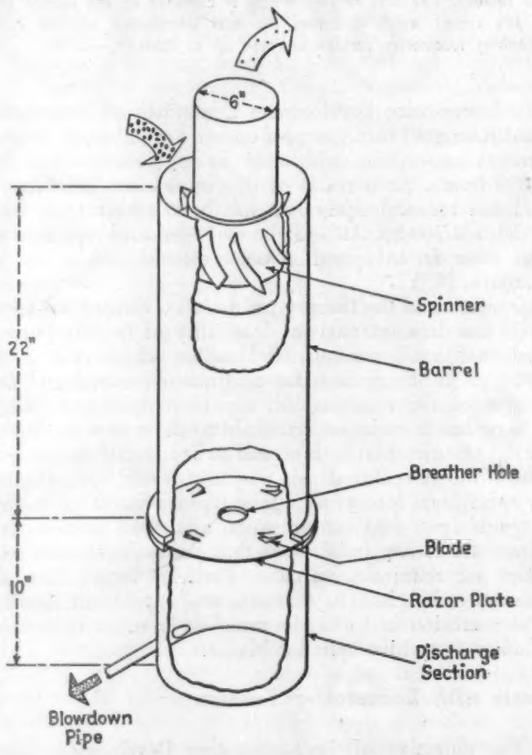
full-capacity coal-handling equipment had been ordered from Standard Stoker Company and a pulverizer had been purchased from the Babcock & Wilcox Co. Erection of a test plant was undertaken, under the supervision of E. L. Cofrances, in a suitable building made available by the Alco Products Division of the American Locomotive Company at Dunkirk. The engineering of the test plant was carried out at the Schenectady, N. Y., office of the American Locomotive Company, and construction of most of the components was done in the Dunkirk shops of the Alco Products Division.

Coal-Handling Equipment

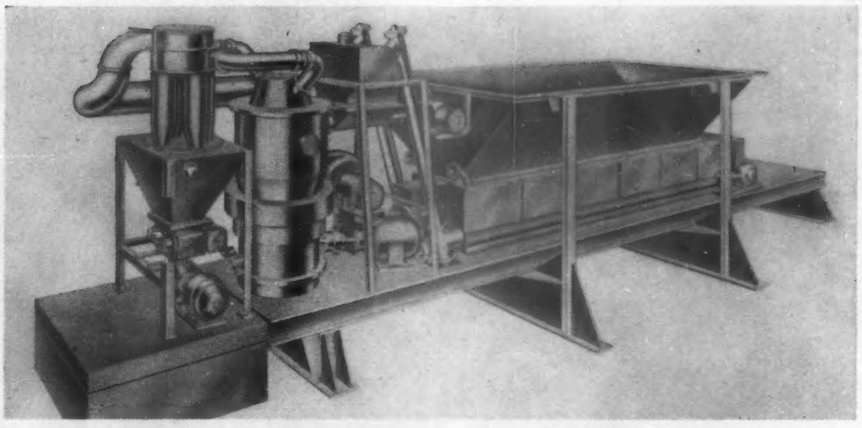
The coal preparation equipment is all designed to fit within the space limitations of a locomotive. The original specifications for the first experimental locomotive called for equipment which could take aboard run-of-mine coal, dry and pulverize it, and feed it under proper control to a variable-speed gas turbine. The general principles of the system are similar to those used with considerable success in the Houdry plant. One of the illustrations gives a perspective view of the coal-handling equipment as it is now installed at Dunkirk.

The coal is delivered from the bunker by a special stoker, designed and built to L.D.C. specifications by the Read Standard Corporation (formerly the Standard Stoker Company). Coal is carried towards the rear of the stoker by a two-level screw and crushed to minus 2-in. lumps by the conventional breaker plates. The crushed coal is then dropped into two parallel ribbon-type screws which move it forward through the drying section. Hot air from the turbine exhaust passes at low velocity through the drying sections, moving countercurrent to the coal. Twin elevator screws lift the crushed and dried coal to a storage tank located between the bunker and the pulverizer.

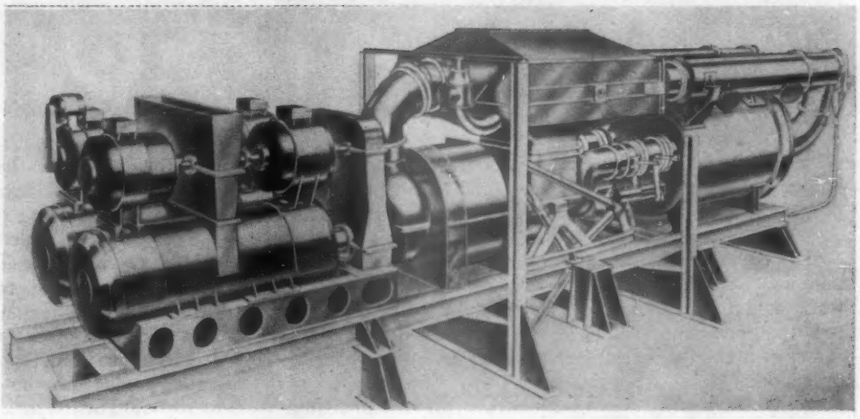
The stoker is driven by a 25-hp. induction motor through a Vickers variable-speed, reversible, hydraulic transmission. Power for the stoker and all other auxiliary equipment will come from two 175-k.v.a. alternators which are driven by the turbine reduction gear. The frequency of this a.c. supply will vary from 66.6 to 40 cycles as the turbine slows down from its full-load speed of 5,700 r.p.m. to its idling speed of 3,420 r.p.m. Thus,



The Dunlab Mark II ash separator. The ash, with a small percentage of air, is skimmed off into the discharge section by the blades in the razor plate. Less than 2 per cent of the air passes through the blowdown pipe



The test installation of coal preparation equipment is designed to fit within locomotive cab dimensions. From right to left are the raw coal hopper, underneath which is the stoker and drier; the crushed-coal storage; the ball mill pulverizer, and the pulverized coal storage. Below this, in order, are the coal feeder and coal pump



Test installation of the Allis-Chalmers locomotive gas-turbine power plant. The ash-removal equipment is at the right; the generators at the left. The turbine and compressor with the economizer above are in the middle

the rate of coal delivery will automatically vary from 100 per cent at full turbine speed to 60 per cent at idling. The variable-speed feature of the Vickers transmission allows the stoker delivery rate to be adjusted over a wide range; reversing of the stoker screw is the usual method of freeing obstructions which may jam the main screw. The overload valve between the Vickers pump and the hydraulic motor will open if the stoker stalls, thus preventing damage to the pump or its driving motor.

This relatively complicated driving arrangement was installed in the first stoker to give it the widest possible flexibility. Future versions will undoubtedly be much simpler and less expensive.

The operation of the stoker is controlled by a Fuller level indicator mounted in the top of the crushed coal tank. This indicator starts the Vickers hydraulic motor through a solenoid valve when coal is needed, and stops the motor when the tank level is restored. Thus, the stoker delivery rate is kept reasonably close to the turbine fuel requirements, but enough storage (500 lb.) is provided so that exact regulation of the stoker is not needed.

In the Dunkirk test installation, a.c. power can be supplied to all of the auxiliary motors from the plant utility system by throwing a three-pole switch. The coal-handling system can thus be tested without the necessity of running the main power plant. Direct current is normally supplied by a 25-kw. generator which is driven from the reduction gear. A 64-volt locomotive battery and charger are also provided so that the few d.c. auxiliaries (coal feeder and emergency lubricating-oil pump) can be operated and controls energized when turbine is shut down.

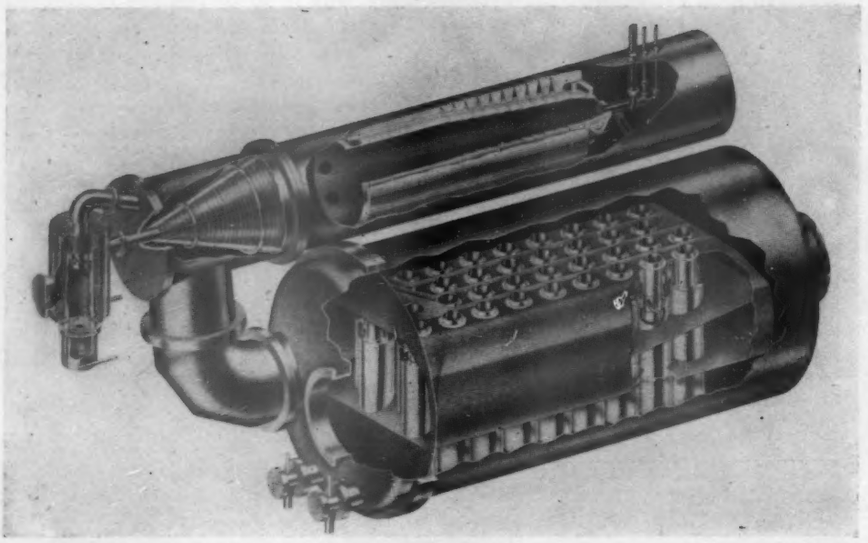
Coal is delivered from the crushed-coal storage tank to the pulverizer by a transverse screw which is driven by a two-speed a.c. motor. This motor will also change speed in proportion to turbine speed, but the mill level controller will start and stop the motor through suitable switch gear.

The pulverizer is a two-row Babcock & Wilcox mill, rated to deliver about 4,500 lb. of 90 per cent-200-mesh coal per hour (grindability not lower than 50 Hardgrove).

It is driven by a 50-hp. induction motor which, like the other auxiliary motors, is started and stopped by push buttons on the coal-handling electrical panel. The mill has a high-pressure casing which would enable direct firing to be tried if the atmospheric system should at a later date be replaced by a pressurized system.

From the mill the pulverized coal is carried through two discharge pipes by air supplied by a 3,000-cu. ft. per min. blower, driven by a 30-hp. induction motor. The air flow can be regulated by dampers. A recirculating air system is used in which the air, after the coal has been stripped out by the collectors, is returned to the blower intake. The collector consists of four Type 10 VSX Multiclones which discharge into a small storage tank.

Coal delivery to the storage tank is controlled by a second Fuller level indicator which operates a relay in series with the pulverizer level controller. When the pulverized coal level falls below the desired point, the Fuller indicator calls for coal. The pulverizer level controller, a standard Bailey Meter Company instrument, then tells



The combustion and ash-removal system

the crushed-coal feed motor whether the mill needs coal. If the pulverized coal tank is full, the mill controller is overruled and no coal is supplied until the tank level indicator again calls for coal.

It is expected that this rather complicated control system will be simplified after operating experience shows what actually happens with varying turbine speed and fuel requirements. Preliminary calculations indicate that the system should be self-regulating to a considerable degree.

The pulverized coal is fed by an Omega Machine Company Rotolock feeder which is driven by a d.c. motor through an Oilgear hydraulic transmission. The throttle for the turbine is the speed-control lever on the Oilgear variable-displacement pump. The speed-control lever is actuated by a Hagan pneumatic positioner which can be operated either manually or automatically.

The blow-through coal pump (used in the Houdry turbine test plant at Dunkirk) is driven by a 5-hp. Fairbanks-Morse gear motor. The pump speed will vary from 100 to 60 r.p.m. as the turbine load changes, but this variation is not expected to cause any difficulties.

Booster Blower

Shop air will be used to convey the coal from the pump to the coal splitter and the combustors. A Standardaire positive-displacement booster blower will be used later to take cooled air from the main compressor discharge and raise its pressure enough to overcome the losses in the conveying air system. This booster will be driven by an a.c. motor and the resulting speed variation is expected to give automatic control to the air-coal ratio.

The coal-handling equipment shown in one of the illustrations was built by the Read Standard Corporation under the supervision of John Kane and Eugene Martin. The controls for the various motors were supplied by Allis-Chalmers.

Allis-Chalmers Power Plant

The Allis-Chalmers locomotive-type gas-turbine power plant illustrated is now being erected at Dunkirk under the supervision of T. R. Coffey. The entire power plant is being installed within locomotive cab contour limitations. Temporary duct work is being installed to lead outdoor air from above the building roof through a flow nozzle to the compressor intake. The exhaust will also be discharged through the roof.

Four General Electric air-blown variable-resistance grids have been installed to absorb the power produced by the traction generators. The plant may be operated either manually or automatically from the control station where all of the necessary instruments, valves, etc., are located. Complete test instrumentation has been installed under the supervision of R. D. Lindstrom, formerly of Turbodyne and now senior test engineer for L.D.C.

Combustion and Ash-Removal System

The combustion and ash-removal system is similar to that developed for the Houdry turbine. Twin combustors are used because the height limitation precluded the use of a single large combustor. A louver and a blowdown separator are installed at the end of each combustor. Type 347 stainless-steel and Inconel are used for these components.

From the combustor outlet to the turbine inlet the entire system is subjected to the full turbine temperature of 1,300 deg. F. After carefully considering all available materials, it was decided that the tees, elbows, and the separator shell should be made of Inconel X. This alloy maintains excellent tensile strength up to 1,400 deg. F., thus providing a margin of safety and making internal insulation unnecessary. Experience has shown that, with proper heat treatment, Inconel X can be machined and welded satisfactorily. Robert Bennett of the American Locomotive Company and E. N. Skinner of the International Nickel Company were particularly helpful in establishing proper heat-treating and welding procedures. The large flanges are made of Inconel, while the bolting material is 19-9 DL.

The separator tubes shown in the illustration were originally Type 10 VSX Multiclones, but they have been modified to the Dunlab design. Thirty-six tubes were originally installed, but 10 will be blanked off to raise the air flow to 1,500 cu. ft. per tube. Type 347 stainless steel was used in constructing the internals of the separator.

All of the combustion and ash-removal equipment has been constructed by Alco Products Division of the Amer-

ican Locomotive Company. The design work was done in the American Locomotive Company's Schenectady office, under the supervision of P. R. Broadley of L.D.C. and Alex Ross of Alco. Frank McConvery, Eric Lindahl, and W. G. Colls of Alco's mechanical-engineering staff were responsible for most of the design details.

A test of 250 to 500 hours will be run to determine the effect of 1,300 deg. F. air containing —10-micron ash upon the Allis-Chalmers turbine. If the results are satisfactory, a series of tests will be run simulating actual locomotive operating conditions. The operating crew for these tests will be composed largely of engineers assigned by the mechanical departments of L.D.C. member railroads.

"Does Safety Need Sex?"

This was the challenging question posed at the annual meeting in Detroit of the A.A.R. Safety Section

Retiring chairman J. P. Wadsworth (Canadian National) stands behind the officers to serve the A.A.R.'s Safety Section for the coming year. Seated (from left to right) are R. P. Hamilton of the St. Louis-San Francisco, vice-chairman, D. E. Mumford of the New York Central, chairman, and H. S. Dewhurst of the A.A.R., secretary

Safety is a dull, dreary, dismal, difficult, pontifical subject which—despite many years of preaching—has not yet been 'sold' to the people who have accidents. What we need is a more realistic approach. An approach not with statistics, but with dramatics and people that can breath life into the cause. Don't be afraid to use 'cheesecake' in your work notwithstanding the somber nature of accidents. Put some sex into it and aim at preventing accidents—not harping on their effects."

These were the words of Paul Jones, director of public information for the National Safety Council, to the more than 400 members of the Safety Section of the Association of American Railroads gathered at Detroit, Mich., for the section's 31st annual meeting on June 5, 6 and 7. Speaking at a luncheon session in the Hotel Statler on June 6, Mr. Jones told the safety men that efforts to save lives through accident prevention had been far out-paced by efforts to save lives through disease prevention. "It is a hard cause to sell," he said, "for it is not as dramatic as polio, cancer or heart disease, and nobody wants to be 'safe' anyway. Yet safety can and must be sold. It must be sold with a warm, sympathetic and friendly approach—one which relates the savings of safety to the man, not to his company. This is a job for public relations and it is nothing more than simply preaching the golden rule. Humanitarian relations holds no finer job."

That the golden rule does an effective job in accident prevention was clearly illustrated by Albert E. Cobo, mayor of Detroit, in his address of welcome. The city, he explained, had been without public transit for nearly 50 days due to a bus and street car operator's strike. "Despite the vast increase of vehicles on our streets, traffic fatalities have actually decreased. Our police department reports that everywhere a new spirit of courtesy among motorists has been born out of the crisis. There is no doubt that this spirit has saved many lives," he said.

"Due to their handicap of scattered forces, all-weather and all-terrain operation, the railroads have a far greater problem in promoting safe operations than do other industries," said J. H. Aydelott, vice-president, operations and maintenance department of the A.A.R. Speaking at the opening session on June 5, Mr. Aydelott told the safety men that they should not be too discouraged if the full measure of improvement in the safety performance was not secured last year. The consistently im-

"We must overcome this trend."—J. H. Aydelott of the A.A.R.

"The Golden Rule does an effective job." — Mayor A. E. Cobo of Detroit

"Safety can strengthen our 'big muscles'." — N. H. Dearborn of the National Safety Council

proved performance within the past two decades and the already low ratio of accidents to employment have materially cut the opportunities for a sizeable reduction—percentage-wise—in casualties. "If only a few railroads have a little bad luck, the effect is readily discernible in the statistics," he said.

"High speeds in themselves do not adversely affect the safety performance of the railroads. Accidents do result, however, when there is a failure to control the movement of a train in circumstances which require it. . . . Criticism has been expressed that the railroads were courting accidents in allowing senior men to operate their passenger trains. Some have even suggested that no man beyond the age of 45 should be permitted to be an engineer of a passenger train. In answer to these criticisms, considerable investigating has been done by government agencies and other groups to determine whether the age factor is important in connection with railway accidents. These studies have developed that the age factor can be eliminated as a contributing cause."

Mr. Aydelott urged a closer personal relationship between supervisory officers and employees—extending even to a knowledge of the employee's off duty life—which should grow in importance from a safety standpoint as the mechanization of various departments increases.

Such a suggestion, he said, would add to the already great responsibilities of supervision. "Knowing of these growing responsibilities," he continued, "many men in the ranks who now receive compensation greater in many cases than the supervision received a few years ago, are refusing promotion to the supervisory ranks. Too many railroads are not providing for the supervision of the future . . . and it is not because we do not have men with proper qualifications. We must find some way to overcome this trend of thinking among so many in the ranks."

"Big Muscles"

Likening America to a huge body, with the nation's railroads as its muscles, Dr. Ned H. Dearborn, president of the National Safety Council, pointed out that safety work strengthens the nation's "big muscles"—both in war and in peace. "In nearly a decade of constant travel over the face of the country I have gained a full appreciation of the railroads' worth. At the same time, I have witnessed an extraordinary growth in the safety movement— particularly on the local level. Budgets for safety work, national and local, are treble what they were prior to World War II. There is an increase of activity by leading citizens and a swelling tide of general interest in safety which should be of considerable help to the railroads in conducting their own safety work. It is significant that the relative position of a safety officer has advanced to that of a direct advisor to top management; that the quality of safety officers has improved and that management's interest in safety is far more direct than it was a decade ago. Now what remains is to get people to accept responsibility for their own personal safety. When this is done, the work of industrial safety leaders will be eased. With the effective media at our disposal, the task should not take as long for safety as it did for public health."

Track Motor Cars

"Both railroad management and our brotherhood agree that the track motor car is a blessing. But with its use there arises a need for continuing and unending caution," T. C. Carroll, president of the Brotherhood of Maintenance of Way Employees, told the safety men. There is a crying need, he said, for adequate protection of the movement of these cars, as the records indicate they are the cause of 2 deaths and 44 injuries each month. He lashed out at the use of "line-ups" of intended train movements as the basis for motor car movements over the road, particularly where such "line-ups" were not kept current or complete. He cited the reduction in motor car accidents by one major road which turned to operating them on a train-order basis and he suggested that Congress might be asked to "step in" if a general improvement in the motor car safety record was not forthcoming.

K. A. Borntrager, general manager of the Michigan Central, told the section that supervision must develop good morale to foster a good safety program. "Many supervisors," he said, "have failed because they lack the courage to be open-minded and they cloak themselves in such defeatist statements as 'rules don't permit this,' 'men don't do such things any more,' 'unions won't allow us.' Actually things are not much different today than they were years ago." The supervisor, he said, is the "first line interpreter of company policy and a figurehead for the company among employees. He must be a pschycologist. He must possess the ability to listen to complaints and suggestions and he must be able to awaken the employee to his own importance to the company." Mr. Borntrager cited one instance where an alert supervisor let his employees suggest plans for a much-needed yard facility. The result he said, was that morale was boosted, some hidden old grudges were dropped, the plan for the facility was a good one and the employees took an unusual interest in keeping the building in good shape after it was built.

The Detroit Association of Railroad Superintendents arranged a special program for the morning session of the meeting on June 7. Ten short talks were presented by operating employees, labor representatives and railroad officers from railroads serving Detroit and from the Railway Express Agency. A. W. Laskoske, superintendent of the Detroit division, Michigan Central, acted as master of ceremonies during the program.

E. B. Landry, safety director, U. S. Post Office Department, Washington, D.C., the opening speaker of the final session, told the railroad safety men that it was on the

conduct of railroad operating employees that the safety of the department's R.P.O. clerks largely depends. He suggested that the roads can help by (a) elimination of rough handling of R.P.O. and mail storage cars in termials when such cars have to be "set over" to other tracks before or after a train is operated; (b) stricter obeyance of slow orders where rough track conditions may be encountered; and (c) elimination of obstructions in trackside areas where mail pick-up hooks may be fouled while in use. He said that postal clerks were subject to all applicable rules governing railroad employees while on duty on railroad property. He added that the Southern had opened the doors of its safety instruction car to all railway mail service employees in the hope that a better understanding of railroad operating problems would be gained by the clerks and that greater safety would result.

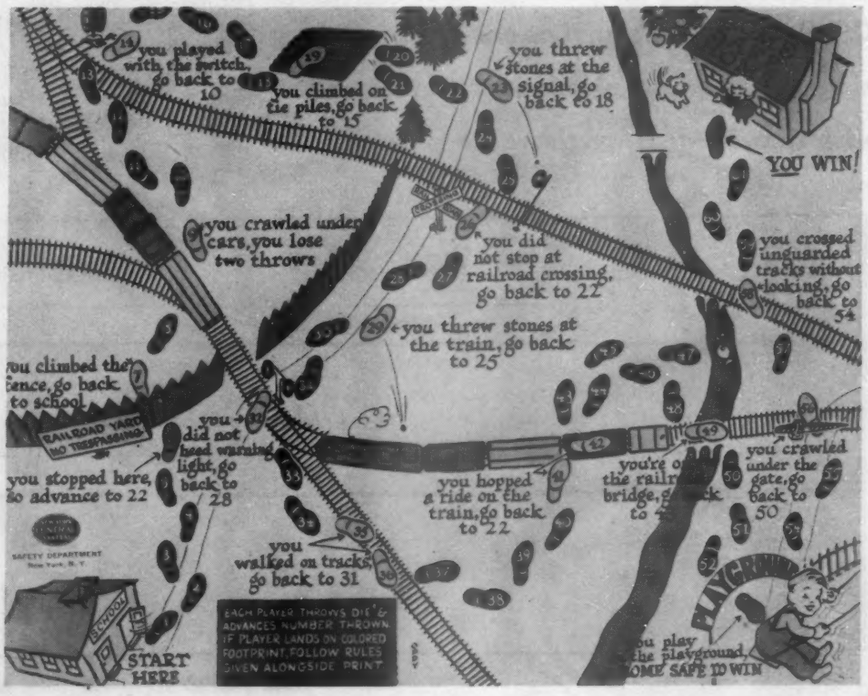
"It's not a hard job—this preventing accidents," said M. M. Cronk, vice-president of the Chesapeake & Ohio (Pere Marquette district), after outlining some of the pschycological factors involved in accident prevention work. "It simply takes a lot of effort, coupled with wisdom in dealing with employees, supervisors and officers. When a preventable accident occurs, management has failed to make itself understood in one way or another. It is unthinkable that this needless loss of life, time and goods should continue. An all-out program designed to encompass every one will make this type of accident unpopular. Unpopularity means eradication. Let the truth be known and we have succeeded."

A record crowd of over 400 registered for the three-day meeting. They represented some 60 different American and Canadian railroads. At the conclusion of the meeting, retiring chairman J. P. Wadsworth, superintendent of safety of the Canadian National (and the section's first "international" chairman) turned the gavel over to his successor—and former vice-chairman of the section—D. E. Mumford, superintendent of safety, New York Central system. R. P. Hamilton, superintendent of safety of the St. Louis-San Francisco was elected to succed Mr. Mumford as vice-chairman.

"The greatest obstacle to accident prevention is that we make the task too complex." — M. M. Cronk (right), vice-president and general manager of the Chesapeake & Ohio (Pere Marquette District)

"Many supervisors have failed to develop the good morale needed to foster a successful safety program because they lack the courage to be open-minded." — K. A. Borntrager (above), general manager, Michigan Central (N.Y.C. system)

"We all agree that the track motor car is a blessing. But with their use there arises a need for continuing and unending caution."—T. C. Carroll (right), president, Brotherhood of Maintenance of Way Employees


you played with the switch, go back to 10
you climbed on tie piles, go back to 15
you threw stones at the signal, go back to 18
YOU WIN!
you crawled under cars, you lose two throws
you did not stop at railroad crossing, go back to 22
you crossed unguarded tracks without looking, go back to 54
you threw stones at the train, go back to 25
you climbed the fence, go back to school
RAILROAD YARD NO TRESPASSING
you did not heed warning light, go back to 28
you stopped here, go advance to 22
you hopped a ride on the train, go back to 22
you crawled under the gate, go back to 50
you walked on tracks, go back to 31
SAFETY DEPARTMENT
SCHOOL
START HERE
EACH PLAYER THROWS DIE & ADVANCES NUMBER THROWN IF PLAYER LANDS ON COLORED FOOTPRINT, FOLLOW RULES GIVEN ALONGSIDE PRINT
PLAYGROUND

A safety game for children, played like Parchesi, is the latest development by the New York Central's safety department. Made of stiff paper, the game board, which is in color, contains a railroad safety problem on one side (picture here) and a highway safety game on the other. It is part of the program of D. E. Mumford, director of safety, to "make safety fun"

Trains normally enter a siding at the end with dispatcher-controlled power switch and signals

Trains normally depart from the end of the siding which is equipped with a spring switch

Frisco's Light-Traffic C. T. C. Uses Power Switches and Spring Switches

Automatic block signaling on 137 miles of single-track replaced by simplified centralized traffic control with power switch and C.T.C. controlled signal at one end of each siding, and spring switch at the other end with dwarf signal at clearance point

By using a spring switch at one end and a power switch with signals at the other end of each siding, the St. Louis-San Francisco has cut the cost of an experimental installation of centralized traffic control recently completed on 137 miles of light-traffic single-track line between Springfield, Mo., and Thayer on the route between Kansas City and Memphis.

On other single track divisions, which handle heavier traffic, this railroad has 528 miles of conventional C.T.C. with a power switch and dispatcher-controlled signals at both ends of sidings. On the Springfield-Thayer division, however, the schedules include only 10 to 18 trains

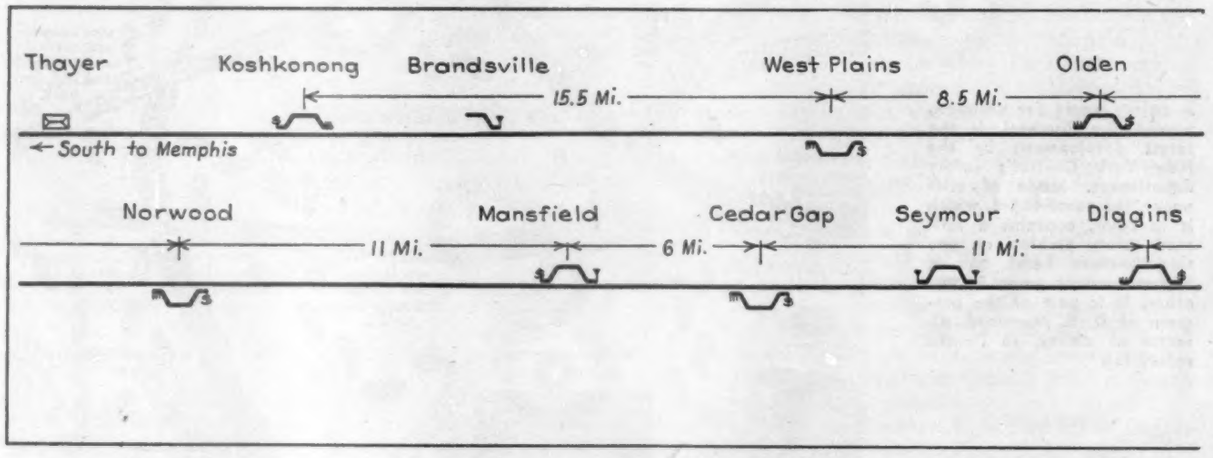


Fig. 1—Track plan of entire 137 miles of centralized traffic control territory

daily—two passenger trains and two through freight trains each way with several extras, and a local freight each way daily except Sunday. Even with this comparatively light traffic, the operating officers were anxious to obtain the benefits of authorizing train movements by signal indication, rather than by train orders.

To minimize the cost of the C.T.C. installation, in proportion to the number of trains operated, a decision was made to make an experimental installation of a modified form of C.T.C. in which a power switch and conventional arrangement of signals would be installed at only one end of each siding, while at the other end there would be a spring switch and only two signals, directing trains either to (1) leave siding or (2) to stop, throw the switch and enter the siding. The original estimates indicated that this arrangement would save about $3,000 per siding, compared with the usual provision of a power switch and conventional arrangement of three signals controlled by line coding at each end of a siding.

C.T.C. Applied to 11 Sidings

This project starts at "MK" Junction, 1 mile from the passenger station at Springfield. The "MK" layout includes a junction of the Ozark branch with the main line, and a junction between the main line to the passenger station and a belt line to the freight yards. An old mechanical interlocking formerly in service at this junction was removed, the new power switches and signals being included in the C.T.C. A siding, 6,500 ft. long, extends south from "MK" Junction along the main line. A spring switch, formerly at the south end of this siding, was removed, and a new power switch machine and signals are included in the C.T.C.

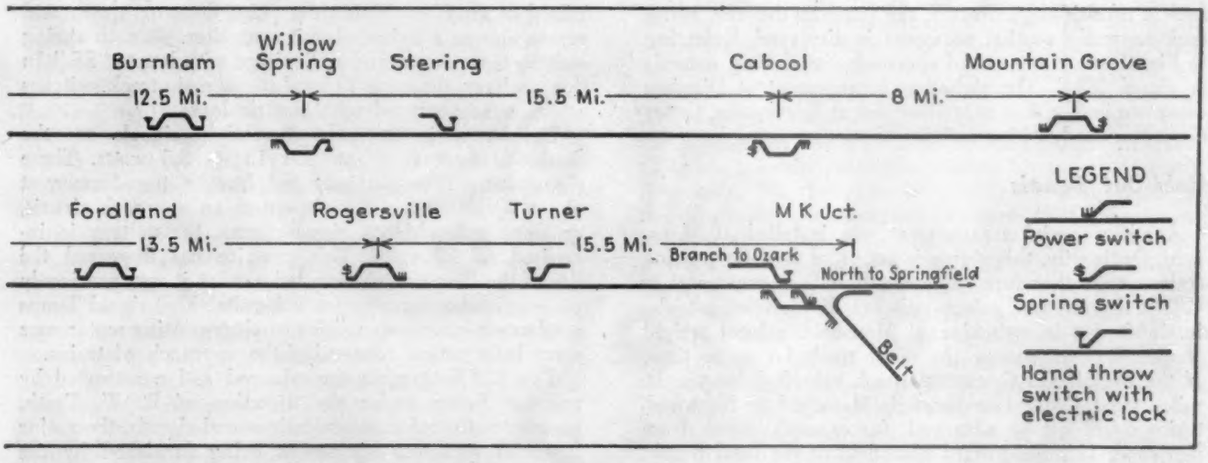
Between "MK" and Thayer, 136 miles, the previous automatic block signaling included 18 sidings at which the conventional arrangement of automatic block signaling applied. This includes the siding at "MK." Experience on various C.T.C. territories on the Frisco for several years has shown that fewer passing tracks are needed with C.T.C. Therefore, as part of the 1950 program on the Springfield-Thayer territory, six sidings were converted to house tracks or spurs with no provision for using them for train meets. At each of three such locations, Turner, Sterling and Brandville, one switch was removed, thus leaving a spur. At Fordland, Seymour and Burnham both switches were left in place, but no

If a train, approaching on the main track, is to be directed to enter a siding at the spring switch end, the indicator shown here is controlled to display the letter "S"

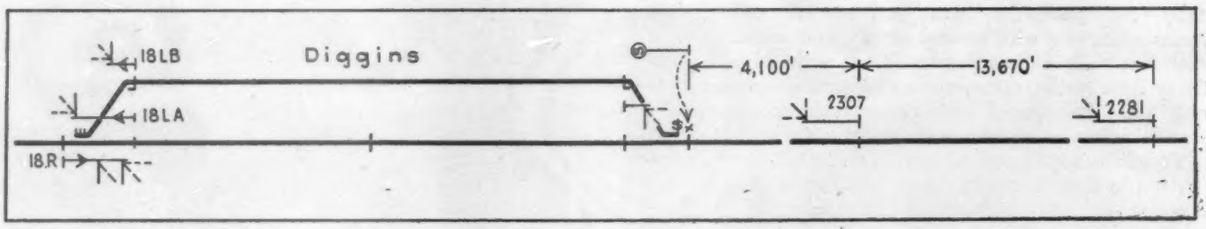
C.T.C.-controlled signals were installed. This left 10 sidings at which there is a spring switch at one end and a power switch and C.T.C. signaling at the other, and one siding with hold-out signals.

At Rogersville the power switch is at the north end and the spring switch at the south end. At Diggins, on the other hand, the power switch is at the south end and the spring switch at the north end. The operating practice, when making a meet, is to use the power switch to head in the train that is to take siding. Then, after the other train has passed, and the leave-siding signal has been cleared, the train on the siding heads out through the spring switch and proceeds without the necessity of stopping to restore the switch to normal. In this practice, no train stops are required for trainmen to operate switches, and, of course, all train movements are authorized by signal indication.

Referring to Fig. 2, if circumstances with reference to



showing locations of power switches and spring switch at sidings



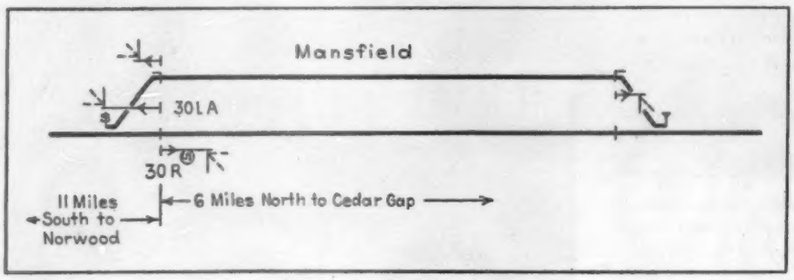


Fig. 2—Track and signal plan for layout at the siding at Diggins

Fig. 3—Hold-out signals for cutting long overall C.T.C. block

tonnage of trains and time of arrival are such that the dispatcher wants a southbound train to take siding at the hand-throw switch at the north end of Diggins, he sends out a control that causes a letter "S" to be displayed on a take-siding indicator, located at the right of the track approaching the facing point of the spring switch at the north end of this siding. At the same time, the Approach aspects are displayed in the intermediate signals 2307 and 2281, located 4,100 ft. and 17,700 ft., respectively, in approach to the switch. These aspects direct the engineman of a south-bound train to stop short of the switch. Then the head brakeman goes to the switch and operates the hand-throw stand to line the switch for the train to enter the siding. When the train is in the clear, a trainman restores the switch to normal.

Each take-siding indicator consists of a lamp unit with a 14-in. ground-glass cover, as shown in one of the illustrations. The unit is on a mast to bring the center of the glass cover 10 ft. above the level of the base of rail. Normally the lamp is dark. When the dispatcher sends out a control, the letter "S," in white, is outlined in black on the ground glass cover, as shown in the picture. The "S" is the only aspect displayed by such a take-siding indicator, the lamp in the unit being dark normally, so that no aspect is displayed. Referring to Fig. 2, the H control of approach signal 2307 extends to signal 18LB. The signaling arrangement at Diggins, as shown in Fig. 2, was applied also at Rogersville, Cedar Gap, Norwood, Olden and Koshkonong.

Hold-Out Signals

Another special arrangement was installed at Mansfield. Ordinarily, this siding is not to be used for passing trains, and, therefore, a conventional arrangement of C.T.C. signals and power switches did not seem to be justified. But in switching at Mansfield a local freight frequently may occupy the main track for some time. If the overall C.T.C. control block extended for the 16 miles from Cedar Gap through Mansfield to Norwood, trains could not be advanced, for example, north from Norwood, 11 miles toward Mansfield, if the local freight was on the main track at Mansfield. The C.T.C. overall block was cut by installing a double location of C.T.C. controlled signals, 30LA and 30R, on the main track opposite the fouling point at the south end of the siding at Mansfield, as shown in Fig. 3. With this arrangement, if the local freight is switching at Mansfield, a northbound train can be advanced to that siding. As the through train approaches, the local freight gets in the clear. Then the dispatcher clears signal 30R, and the train proceeds without stopping. In rare instances, when it is necessary to direct a northbound train to take siding at Mansfield, the dispatcher sends out a control to light the "S" indicator mounted on signal 30R.

Switch Operation

The power switches are operated by Union Switch & Signal Co. Style M-2, 20-volt d.c. switch machines. Each spring switch is equipped with a Pettibone-Mulliken oil buffer unit. At each such switch the old hand-throw stand was replaced by a U. S. & S. Co. Type S-21 hand-throw switch-and-lock mechanism. No lock rods are used, and in the mechanism the bar and facing-point lock are welded to the block operated by the lever. If the lever is raised as much as 10 in., the point detector opens, and serves also as a switch circuit controller. At each spring switch, there is a circular disc sign with letters "SS." In this territory, there are 79 hand-throw main track switches which were equipped with electric locks.

The lamps in the new searchlight signals are the double-filament type rated at 13 + 3.5 watts. These signal lamps are normally fed from a transformer at about 8 volts. When a train enters an approach circuit, or when a head-block signal clears, the voltage is increased to 9.2 volts. This practice has increased the life of the lamps more than twice what it was previously on continuous burning at 9.2 volts. The signal lamps are burned constantly to give employees using motor cars some information concerning the approach of trains.

This C.T.C. project was planned and constructed by railroad forces under the direction of R. W. Troth, superintendent of communications and signals, the major items of signaling equipment being furnished by the Union Switch & Signal Co.

Frederic C. Dumaine, Jr., Succeeds His Late Father as New Haven President and Chairman

The directors of the New York, New Haven & Hartford at a special meeting in Boston on June 7 elected Frederic C. Dumaine, Jr., president and chairman of the board to succeed his late father, Frederic C. Dumaine, Sr., whose death on May 27 was reported in *Railway Age* of June 4, page 102. At the meeting, C. Provost Boyce of Baltimore, a member of the board of directors, was elected to the executive committee. The chairmanship, the road announced, was offered to Charles Francis Adams, a friend and associate of the late Mr. Dumaine for over 40 years, who, for personal reasons, regretfully declined. Mr. Adams will continue as a director.

Railroad Background

The new chief executive of the New Haven was born on September 5, 1902, in Concord, Mass. He attended private schools in Connecticut and in 1923 graduated from Pomfret, where he starred at hockey. A director and a member of the executive committee of the New Haven since December 1949, Mr. Dumaine was for 14 years a director and a member of the executive committee of the Maine Central and the Boston & Maine. Before that he was a director of Eastern Steamship Lines. Among the enterprises of which he is currently a director are the Lehigh Coal & Navigation Co., the Middlesex & Boston Street Railway, the Springfield Street Railway, the Pennroad Corporation, the Amoskeag Company, Eastern Gas & Fuel Associates, and the Boston Edison Company.

At the conclusion of the meeting, Mr. Dumaine issued the following statement: "I appreciate fully the problems of the New Haven and the responsibilities imposed upon me, but with the aid and cooperation of the men and women of the New Haven, the support of the public served, and the confidence of the investors, this great system so vital to New England should prosper. You can expect my full cooperation."

Mr. Dumaine, at a press conference after the special meeting, told reporters he would continue his father's policies. Occasionally, he said, the latter seemed to be "a little rough," but he added, he hoped he was "young enough" and could "smile enough to do things a little smoother." He said he regretted the unfavorable publicity the New Haven had received for dismissing certain employees (*Railway Age*, April 2, page 63). Defending the road against charges of alleged unfairness in the matter, Mr. Dumaine said all persons dismissed actually had received "pretty good treatment" in the form of severance checks and pension benefits. The New Haven's program of improving roadbed and modernizing equipment probably will keep it slightly in the red for the next few months, he continued. Increases in wages and material costs, he pointed out, have increased the road's monthly operating costs by $1,400,000.

Questioned by reporters about the origin of the nickname "Buck," used by his friends, Mr. Dumaine explained that it had been acquired at Pomfret, where he was "a little rough" as a member of the hockey team. He was christened "Buck" by the team captain because the latter had read a book in which a character of that name had exhibited the same tendencies.

Mr. Dumaine, Sr.

The late Mr. Dumaine, Sr., born in Hadley, Mass., on March 6, 1866, was educated in the Dedham public schools and began work as a $4-a-week office boy when he was 14 years old. From such a position in the Amoskeag Company he worked his way up to become, 25 years later, treasurer of Amoskeag, when, after various mergers, it had become the world's largest producer of cotton goods. Never relinquishing his association with Amoskeag, Mr. Dumaine in 1923 became president of the then recently reorganized Waltham Watch Company, his interest in which was sold early in 1944. From 1923 through 1947 he had been a member of the New Haven's board of directors, serving also on the board's executive committee from 1929. On August 13, 1948, after quietly acquiring control of the road, he was elected chairman and president, serving in this dual capacity until, nineteen days later, Laurence F. Whittemore was elected president. Mr. Whittemore, who, just before coming to the New Haven, had been president of the Federal Reserve Bank of Boston, resigned on December 21, 1949, and the elder Mr. Dumaine again assumed the presidency.

User Basis Depreciation Accounting on the Canadian Pacific

Part II*

In setting up user depreciation accounting a sound basis must be used. Canadian Pacific accounting officers believe that road has done so. They emphasize that determination of the user rate requires: (1) determining the cost or other basic value of the property to be depreciated; (2) an estimate of net salvage value at date of retirement; and (3) an estimate of service life. Under this method the C.P.R. calculates depreciation charges by applying a rate per unit of use to the number of units of use accumulated in a given period.

It is the determination of service life which is basic to the whole user concept. The railroad determined "normal" use of its equipment through use of the statistical "law of growth."

According to this concept, growth, over a period of time, shows a definite pattern which is a characteristic of most industries. The pattern of growth falls into four stages: (1) a period of experimentation when the amount of growth is not great; (2) a period of rapid growth; (3) a period of retarded growth during which the enterprise approaches the saturation point; and (4) a period of stability. In describing the growth trend, a recognized statistical technique is to fit a mathematical curve to the data. The logistic curve was found to be most suitable for the data and most logical in picturing them.

Unit of Use

In establishing normal use for locomotives, the C.P.R.'s problem was to determine a unit of use which measured the intensity of that use. The C.P.R. people thought that any such unit must take into account both mileage and tractive force. The capacity-mile was decided upon as being that unit of use. (The capacity-mile represents the mileage runout by locomotives weighted by

* Part I of this article was published in the June 9 *Railway Age*, page 50.

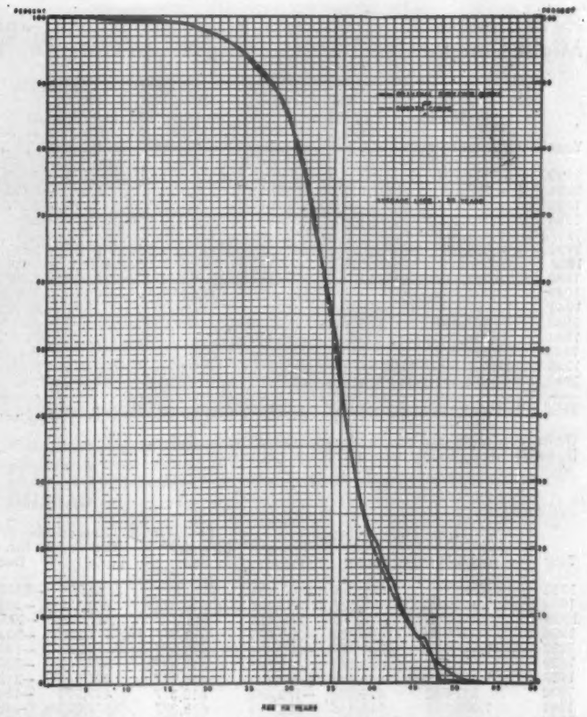
their respective tractive forces.) For convenience, units of 50,000 lb. of tractive force were used. Employing these figures, capacity miles for the period 1885-1949 were plotted on a ratio scale. The curve produced, C.P.R. officers explain, shows that the underlying trend of locomotive use has followed the normal pattern of growth. The logistic curve, when fitted to the capacity-miles, was found to provide an adequate description of this growth trend.

The value of the growth trend for the year 1949 in capacity-mile was taken as the figure representing the normal annual use of locomotives. Since the runout mile is a more readily available figure than is the capacity-mile, for computing depreciation accruals each month 1949 normal capacity-miles were converted to runout miles by relating them to the average tractive force of the units in service during the year.

The next step was to determine the period of time during which the property (in this case locomotives) remains in service, or, in other words, the number of units of use derived from the locomotive from the date of its installation to its retirement. While the average life of a group of locomotives can be calculated, each unit is not retired at the same age. Therefore, to develop the average service life, data were summarized by age groups and a survivor curve was developed, i.e., a curve which shows the percentage of the units placed in service that were still in service each year from age 1 on.

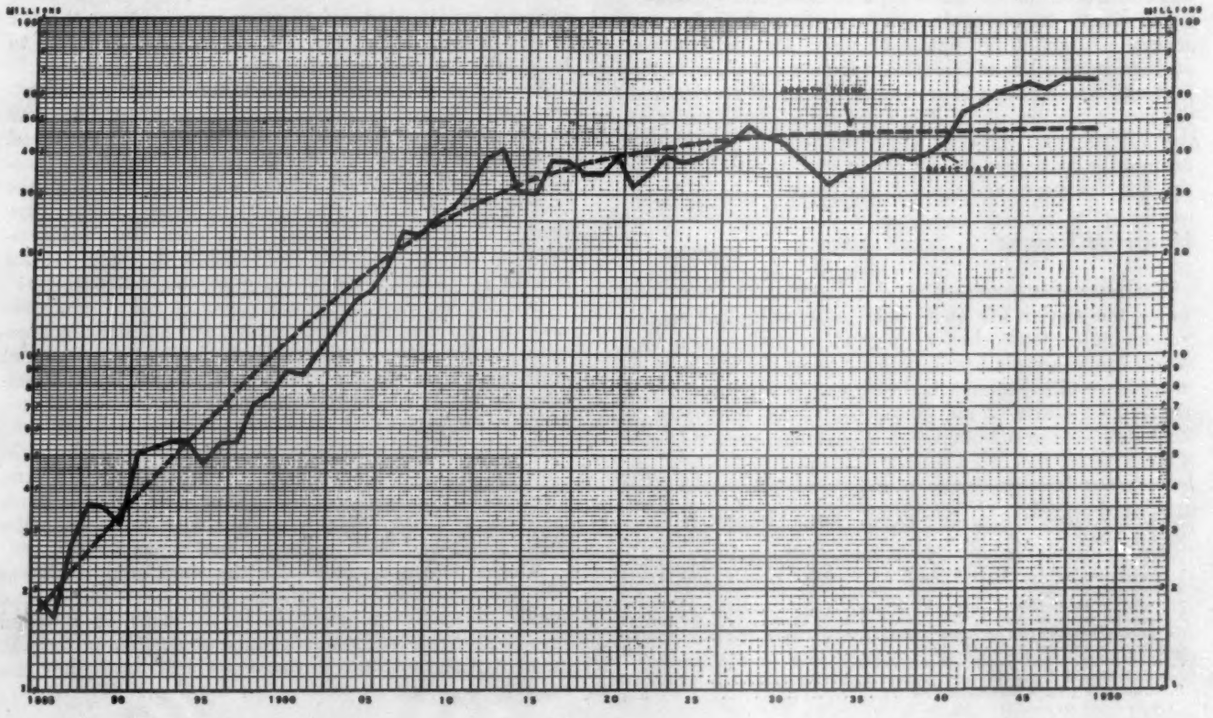
The service life of all new steam locomotives placed in service by the C.P.R. between 1882 and 1948 was studied. Examination of the data indicated that the war period (1940-1948) had created a distortion which did not fit the retirement pattern up to that time. So the analysis was made on the basis of the years 1882-1939.

The analysis included a total of 2,812 units, 1,053 of which had been retired, while 1,759 were still in service at the end of the observation period. A survivor curve



Original survivor curve for steam locomotives is the solid black line, while the smoothed curve is the broken line. Retirements began at an early age but began coming fast after steam power had reached the age of 25 years. Average life of C.P.R. locomotives, as shown here, has been 35 years

The C.P.R. believes that this curve shows very well how the railroad's history complies with the law of growth. The solid line, which shows locomotive capacity miles run in each year since 1885, fits very closely the growth trend curve, which shows that when the curve was plotted the railroad was in a somewhat static period except for the abnormal years of the second world war



How Charges for Track Materials and Straight-line Depreciation of Road Property and Rolling Stock Might Compare with Same Charges Calculated on Basis of Use—15-year Period 1933-1947

CARRIER "Y"

Year	Track Material Expense			Road Property Depreciation (1)			Rolling Stock Depreciation (2)			Summary		
	Actual	Use Basis	Inc. or Dec.	Straight-line	Use Basis	Inc. or Dec.	Straight-line	Use Basis	Inc. or Dec.	Actual Basis	Use Basis	Inc. or Dec.
1933	$4,114,204	$6,461,710	$2,347,506	$17,220,650	$11,280,266	—$5,940,384	$22,321,810	$15,723,660	—$6,598,150	$43,656,664	$33,465,636	—$10,191,028
1934	4,797,639	6,597,411	1,799,772	17,220,650	11,517,161	—5,703,489	22,321,810	16,143,092	—6,178,718	44,340,099	34,257,664	—10,082,435
1935	4,308,823	6,822,749	2,513,926	17,220,650	11,910,535	—5,310,115	22,321,810	16,437,777	—5,884,033	43,851,283	35,171,061	—8,680,222
1936	7,173,887	7,918,605	744,718	17,220,650	13,823,581	—3,397,069	22,321,810	18,866,506	—3,455,304	46,716,347	40,608,692	—6,107,655
1937	9,178,366	8,403,866	—774,500	17,220,650	14,670,705	—2,549,945	22,321,810	19,813,173	—2,508,637	48,720,826	42,887,744	—5,833,082
1938	4,318,957	6,707,179	2,388,222	17,220,650	11,708,784	—5,511,866	22,321,810	16,064,916	—6,256,894	43,861,417	34,480,879	—9,380,538
1939	7,618,320	7,967,381	249,061	17,220,650	13,734,159	—3,486,491	22,321,810	18,259,092	—4,062,718	47,160,780	39,860,632	—7,300,148
1940	8,897,692	8,724,826	—172,866	17,220,650	15,231,007	—1,989,643	22,321,810	19,993,973	—2,327,837	48,440,152	43,949,806	—4,490,346
1941	11,946,766	10,767,124	—1,179,642	17,220,650	18,796,265	1,575,615	22,321,810	24,132,679	1,810,869	51,489,226	53,696,068	2,206,842
1942	13,161,574	13,186,979	24,405	17,220,650	23,020,629	5,799,979	22,321,810	28,839,367	6,517,557	52,704,034	65,046,975	12,342,941
1943	14,065,455	13,884,330	—181,125	17,220,650	24,238,000	7,017,350	22,321,810	30,177,954	7,856,144	53,607,915	68,300,284	14,692,369
1944	14,974,005	14,150,042	—823,963	17,220,650	24,701,857	7,481,207	22,321,810	30,647,833	8,326,023	54,516,465	69,499,732	14,983,267
1945	15,896,012	12,873,207	—3,022,805	17,220,650	22,472,874	5,252,224	22,321,810	28,286,943	5,965,133	55,438,472	63,633,024	8,194,552
1946	14,441,345	11,806,001	—2,635,344	17,220,650	20,609,844	3,389,194	22,321,810	26,127,157	3,805,347	53,983,805	58,543,002	4,559,197
1947	13,075,338	11,796,973	—1,278,365	17,220,650	20,594,083	3,373,433	22,321,810	25,313,028	2,991,218	52,617,798	57,704,084	5,086,286
Total	$147,968,383	$147,968,383	....	$258,309,750	$258,309,750	....	$334,827,150	$334,827,150	....	$741,105,283	$741,105,283	....

(1) Includes shop and power plant machinery depreciation.
(2) Locomotives, freight cars and passenger cars.

CARRIER "Z"

Year	Track Material Expense			Road Property Depreciation (1)			Rolling Stock Depreciation (2)			Summary		
	Actual	Use Basis	Inc. or Dec.	Straight-line	Use Basis	Inc. or Dec.	Straight-line	Use Basis	Inc. or Dec.	Actual Basis	Use Basis	Inc. or Dec.
1933	$265,707	$446,206	$180,499	$618,377	$280,259	—$338,118	$674,062	$361,174	—$312,888	$1,558,146	$1,087,639	—$470,507
1934	343,418	498,527	155,109	618,377	313,121	—305,256	674,062	400,793	—273,269	1,635,857	1,212,441	—423,416
1935	301,070	545,298	244,228	618,377	342,498	—275,879	674,062	430,110	—243,952	1,593,509	1,317,906	—275,603
1936	909,910	658,382	—251,528	618,377	413,526	—204,851	674,062	507,168	—166,894	2,202,349	1,579,076	—623,273
1937	1,047,342	751,907	—295,435	618,377	472,267	—146,110	674,062	592,839	—81,223	2,339,781	1,817,013	—522,768
1938	621,538	633,583	12,045	618,377	397,949	—220,428	674,062	496,140	—177,992	1,913,977	1,527,672	—386,305
1939	1,312,078	646,147	—665,931	618,377	405,841	—212,536	674,062	501,409	—172,653	2,604,517	1,553,397	—1,051,120
1940	862,962	690,900	—172,062	618,377	433,950	—184,427	674,062	526,161	—147,901	2,155,401	1,651,011	—504,390
1941	1,098,608	916,465	—182,143	618,377	575,625	—42,752	674,062	647,699	—26,363	2,391,047	2,139,789	—251,258
1942	901,010	1,517,415	616,405	618,377	953,078	334,701	674,062	978,207	304,145	2,193,449	3,448,700	1,255,251
1943	1,150,289	1,748,208	597,919	618,377	1,098,038	479,661	674,062	1,114,520	440,458	2,442,728	3,960,766	1,518,038
1944	1,607,378	1,746,288	138,910	618,377	1,096,832	478,455	674,062	1,091,705	417,643	2,899,817	3,934,825	1,035,008
1945	1,546,678	1,470,240	—76,438	618,377	923,448	305,071	674,062	931,418	257,356	2,839,117	3,325,106	485,989
1946	1,436,930	1,180,801	—256,129	618,377	741,653	123,276	674,062	736,525	62,463	2,729,369	2,658,979	—70,390
1947	1,363,039	1,317,590	—45,449	618,377	827,570	209,193	674,062	795,062	121,000	2,655,478	2,940,222	284,744
Total	$14,767,957	$14,767,957	....	$9,275,655	$9,275,655	....	$10,110,930	$10,110,930	....	$34,154,542	$34,154,542	....

(1) Includes shop and power plant machinery depreciation.
(2) Locomotives, freight cars and passenger cars.

These hypothetical situations were set up by Canadian Pacific accountants to show rigidity of straight-line depreciation vs. flexibility of user basis, and advantage of the latter in times of low earnings. Actual figures were used for track material expense, but road property depreciation was not accrued by U. S. railroads in most years covered here

was constructed on the basis of these data, and smoothed to eliminate the irregularities and thus describe the general pattern of retirement of steam locomotives. An average service life of 35 years was determined, with the first unit having been retired after a year of service and the last at the age of 53. The steep slope of the curve at the average age shows a concentration of retirements around the average age, and relatively few retirements in the first few years and the last few years.

How It Is Figured

To determine service life of a locomotive in runout miles, the service life of 35 years was multiplied by the runout miles established as current normal annual use. Thus a total service life, in runout miles, for all locomotives in service January 1, 1949, was arrived at. If this figure is divided by the number of units in service at that date, the result indicates an average service life of 1,070,000 runout miles per unit. Since the C.P.R. management expects that dieselization may contract the life of the steam locomotive, the figure was reduced to 1,050,000.

For diesel locomotives the same service life was adopted. While the road's motive power department felt there was every indication that the life, in years, of the diesel would turn out to be shorter than that of the steam locomotive, since the diesel runs more miles annually, the two locomotives will run about the same total mileage during their respective lives. Thus, until more information on the life of diesels is available, the same service life as for steam locomotives was adopted.

Once these figures were available, the C.P.R. staff was able to figure the depreciation rate, which for the locomotives, as indicated in the table, is 5.1 cents per runout mile. For other classes of equipment, freight cars, passenger cars and work equipment, the same general process was followed.

For freight and passenger cars rates were developed in terms of cents per runout mile, although for freight cars, like locomotives, the study of normal was made in terms of capacity miles (the product of the mileage runout by freight cars and their respective load capacities).

The unit of use selected for the work equipment was the gross ton-mile. The primary and most common use made of such equipment is in maintenance of road property. Since such maintenance work follows the pattern of traffic ups and downs, the C.P.R. staff finds this unit appropriate.

CALCULATION OF USER RATES FOR LOCOMOTIVES—YEAR 1949

		Locomotives
1.	Investment at Jan. 1, 1949 (Per C.P.R. books)	$102,283,425
2.	Per cent salvage	5
3.	Salvage value (No. 1 times No. 2)	$5,114,171
4.	Service value at Jan. 1, 1949 (No. 1—No. 3)	$97,169,254
5.	Service life per unit in runout miles	1,050,000
6.	Units in service at Jan. 1, 1949	1,831
7.	Service life of the group in runout miles (000) (No. 5 times No. 6)	1,900,000
8.	User rate (No. 4 divided by No. 7)	5.1¢

In the usual order, I. V. Jessee, comptroller of the Norfolk & Western, and chairman of the Accounting Division of the Association of American Railroads; E. H. Bunnell, vice-president of the A.A.R., in charge of its Finance, Accounting, Taxation and Valuation Department; J. W. Severs, vice-president, finance and accounting, of the Chicago, Milwaukee, St. Paul & Pacific, and first vice-chairman of the Accounting Division; Elmer Hart, comptroller of the Pennsylvania, and second vice-chairman

Accounting Division Holds Its Largest Convention

Smith, McGinnis, Metzman, Bunnell, Kelly and I.C.C. bureau heads address 57th annual session at New York—Ten committee reports also presented

Growing recognition of the importance of railroad accounting officers as the "intelligence agents" of railroad management—plus recognition of the increasing need for accounting officers themselves to adopt "simplified or short-cut methods and procedures" through greater mechanization of paper work—were the dominant themes of the annual meeting of the Accounting Division of the Association of American Railroads, which was held at New York's Biltmore Hotel on June 12, 13 and 14.

The meeting—the 57th of its kind—was described by Division Secretary E. R. Ford as "by far the largest on record." Its program included addresses or informal talks by the presidents of two railroads and the chairman of the board of a third, by two A.A.R. vice-presidents, by the heads of two bureaus of the Interstate Commerce Commission, and by a number of division officers and committee or subcommittee chairmen, as well as reports of 10 standing or special committees and a larger than usual exhibit of accounting machinery and office equipment.

June 11 was devoted to the usual pre-convention "open house" meetings of the division's various committees. The June 12 opening session of the convention proper, in addition to routine business, included an invocation by Dr. William Ward Ayer, brief addresses of welcome by Vincent R. Impellitteri, mayor of New York City, and Gustav Metzman, president of the New York Central, and a talk by R. H. Smith, president of the Norfolk & Western. Among guests attending that session were Presidents W. H. Edwards of the Lehigh & New England, C. A. Major of the Lehigh Valley, William White of the Lackawanna and J. M. Hood of the American Short Line Railroad Association.

"Intelligence Agents"

It was Col. Metzman who described accounting officers as "intelligence agents," whose duty it is "to furnish the information on which future plans and activities are based." Railroad management, Col. Metzman said, "must have accurate statistical information and must have it promptly and in meaningful form" if it is "to steer its course" through the difficulties of "rising costs and subsidized competition."

In his following address, Col. Smith of the N. & W. sounded substantially the same note, saying, in part: "I have always believed that accurate, sensible, performance-revealing statistics are just as important for the operating man and just as essential to good operation as are locomotives and track facilities." He reviewed

W. J. G. Quinn, general statistician of the Southern, and chairman of the Accounting Division's Committee on Statistics, left, confers with Division Secretary E. R. Ford

briefly the improvement in railroad operating practices in the past 30 years, and then added:

"I think [the railroads] have done a wonderful job . . . and they have done it largely because you accountants and statisticians kept for them the charts and the tables by which they were able accurately to measure their performance and progress. . . . The railroad operating man owes to you men of figures a great debt in connection with that improvement. You have provided him with dependable, intelligible statistics which enabled him accurately to gage just how he was doing."

Despite his expressed satisfaction at the operating performance of the railroads, Col. Smith was careful to point out that management is not satisfied with the present level of freight rates or the present rate of return on railroad property investment. That rate in 1950, he declared, "was not only inadequate to attract necessary new capital, but was unfair to the property owners, as measured by rates allowed other public utilities, and was less than the rate of return on which any substantial industry in this country has been built."

The conclusion of Col. Smith's talk was devoted to tributes to E. H. Bunnell, A.A.R. vice-president; to "that great statistician, Dr. Julius H. Parmelee"; to the "men of analytical minds" on the I.C.C. "who appreciate the importance of statistics as a measure of performance and progress in the industry"; and to Dr. William J. Cunningham, professor emeritus of transportation at Harvard Business School—"a great railroad man because he was to a large extent the originator of many of the important accounting techniques by which you today help us operating men measure our performances and keep us spurred to try and improve those performances."

"To Restore Railroad Credit"

The railroad board chairman who addressed the convention was Patrick B. McGinnis, of the Norfolk Southern, who was introduced by G. T. Carmichael, vice-president of the New Haven. Mr. McGinnis, emphasizing throughout that he was talking, "not as an accountant," but "as one who has tried to restore railroad credit by interesting investors in railroad securities," suggested certain changes in railroad accounting procedures which he felt would help to improve the financial position of the carriers. These suggestions, and his reasons for them, were, briefly:

1. To show coverage of fixed charges before rather than after federal income taxes, to put as high as possible the stated coverage of such charges;
2. To eliminate federal income taxes on "other income" before calculating net railway operating income, to avoid burdening N.R.O.I. with taxes not properly chargeable to it and to permit fairer comparison between roads with differing amounts of "other income";
3. To eliminate materials and supplies from current assets, to prevent use against the railroads in wage and rate cases of an inflated asset total;
4. A monthly statement of *net* expenditures for improvement of plant and equipment, after deduction of any amount capitalized through sale of securities, to let investors know just what railroads are doing in the way of improvements and how much is coming out of earnings;
5. A monthly statement of "normal" net earnings, excluding "quick amortization," to facilitate comparisons between different roads and earlier years; and
6. Monthly publication of passenger deficits, in the hope that this would gradually awaken the public to passenger losses and lead eventually to I.C.C. control over discontinuance of passenger trains.

"We can't go on forever," Mr. McGinnis told his audience, "financing fixed plant improvements out of current earnings. We must reestablish railroad credit." The biggest obstacle to doing so, he continued, is "competition —which isn't real competition, because the railroads can't meet it—of the exempt trucker, the contract carrier and the private trucker." The first, he said, is no longer the "farmer or fisherman" Congress originally had in mind. The contract carrier is "a retail carrier operating at bulk rates against the railroads—a bulk carrier compelled instead to operate at retail rates." And the private carrier, "with I.C.C. blessing, is entering the transportation business—though railroads can't go into commercial business." But "the biggest obstacle" of all, he declared, is that "the railroads themselves will never present a united front to overcome these difficulties." "Unless we do so," he concluded, "we won't be attending nice conventions like this 10 years from now when we're hauling sand and gravel."

Kelly, Bunnell Address Meeting

The two A.A.R. vice-presidents who addressed the meeting were W. J. Kelly, of the association's Traffic Department, and E. H. Bunnell, of its Finance, Accounting, Taxation and Valuation Department.

Mr. Kelly's talk, which followed the report of the division's General Committee on June 12, was devoted to matters of mutual concern to railroad accounting and traffic departments. Mr. Bunnell, in his talk, which was delivered at the closing session on June 14, reviewed the "background and organization" of his department, and cited some of its accomplishments—cooperation with the I.C.C. on proposed changes in classification of accounts and in carriers' annual reports to the commission; collaboration with the comptroller general to expedite movement of government traffic and payment of bills for such movement; reduction in clerical cost of interline freight accounting; amendment of Rule No. 7 of the Consolidated Freight Classification; and interesting leading manufacturers of accounting and office machinery in application of their existing machines to, and development of special machines for, railroad use.

Mr. Bunnell likewise pointed out that his department "has provided and will continue to provide services leading to end results physically and mentally impracticable of attainment by the carriers under the predecessor separate and independently functioning organizations." "At the same time," he added, "I fully recognize that whatever success may be credited to the department, in the final analysis, results from the progressive, cooperative and united spirit of the members of the three divisions which it embraces—Treasury, Accounting and Valuation."

At present, he said, "in addition to its unabating routine work," his department is engaged on "some particularly complex problems . . . of major import to the railroad industry." As "typical" of these he mentioned various federal tax matters; mechanization, "so far as practicable," of all railroad "paper work"; simplification of tariff and division publications; preparation of data for supplemental bills covering improper deductions from carriers' bills for handling government freight in World War II; a study of statistical data required of railroads by government agencies "to promote simplicity wherever possible"; collection and analysis of railroad construction cost data; and development of uniform, simplified and standardized treasury forms and practices.

Chairman's Address

The customary chairman's address was also delivered at the closing session, by retiring Chairman I. V. Jessee, comptroller of the N. & W. In it, Mr. Jessee summed up points made earlier in the convention by other speakers as to the importance of railroad accounting work, and the necessity for accounting officers themselves to adopt simplified procedures wherever possible.

"The accounting department," he said in part, "has been described as the 'seeing eye' department of the railroad, not solely because of the compilation and submission to management of facts and figures, but through intelligent and continuous analyses of operating costs to enable management to base decisions upon accurate and up-to-the-minute information.

"To merit continued recognition by management in the formulation of policies, the railway accounting officer must unceasingly devote his efforts toward adoption of simplified or short-cut methods and procedures, not only for production of information sought by management, but to offset increasing demands by regulatory and taxing bodies for additional statistical and other reports, with consequent burdens upon the accounting departments over and above those incurred in the performance of every-day routine—but essential—interline accounting.

"What better way can be found to achieve these objectives than through the pooling of our ideas, experiences and practices in the interest of greater uniformity and standardization? . . .

"We are in an era of rapid change. Good practice today may be obsolete tomorrow. It is our duty to our managements as well as to ourselves to keep abreast of the times by grasping every opportunity to reap the benefit of the best thoughts in our field of endeavor. Through the division, new practices and methods can be broadcast for the information of all members, and no member should hesitate to give others the benefit of what he has originated."

I.C.C. bureau directors who delivered brief informal talks were C. W. Emken (Accounts and Cost Finding) and Dr. W. H. S. Stevens (Transport Economics and Statistics).

Mr. Emken's talk was an expression of appreciation from his bureau "for the help it has received" from the Accounting Division. Dr. Stevens defended the commission's carload waybill analyses, on the ground that statistical information developed from them is "of fundamental value to the railroads themselves" in meeting competition. "The situation in the future," he added, "is going to require more and more such information concerning traffic." He "expects" that the commission will "eventually" get it also from trucks.

Convention speakers included Col. R. H. Smith, president of the Norfolk & Western, left, and Patrick B. McGinnis, chairman of the board of the Norfolk Southern

Committee Reports

The report of the division's General Committee, of which Mr. Jessee was chairman, was presented by Secretary Ford, and was accompanied by short talks by L. F. Ormond, vice-president of the Atlantic Coast Line, who reviewed efforts to have the I.C.C. discontinue its carload waybill analyses; by W. L. Price, vice-president of the Baltimore & Ohio, on freight loss and damage prevention; and by F. E. Martin, comptroller of the Illinois Central, on activities of the special accounting committee on research.

Statistics

The report of the Committee on Statistics, also presented on June 12 by Committee Chairman W. J. G. Quinn, general statistician of the Southern, was accompanied by a paper prepared by Mr. Quinn on the railway passenger deficit problem. An abstract of this paper will be published in a subsequent issue of *Railway Age*.

Other reports, mostly presented on June 13, were those of committees on: Freight Accounts—T. J. Peterson, auditor of revenue, Central of Georgia, chairman; Passenger Accounts—J. L. Sharpe, auditor passenger and station accounts, Illinois Central, chairman; Disbursement Accounts—V. L. Nelson, assistant comptroller, New York Central System, chairman; Terminal Companies' Accounts—F. J. Bresnahan, auditor, Washington Terminal Company, chairman; Motor Bus, Truck and Air Transportation Accounts— M. Rittmaster, general accountant, Missouri Pacific, chairman (report presented by W. P. Reeves, comptroller and treasurer, Maine Central; Water Line Accounts—H. A. Cresswell, vice-president and treasurer, Canada Steamship Lines, chairman; Refrigerator Carline Accounting—E. A. Salomo, auditor, American Refrigerator Transit Company, chairman; and of the special Committee for Contact with the

National Association of Railroad and Utilities Commissioners—C. F. Lodter, auditor, Atchison, Topeka & Santa Fe, Coast Lines, chairman.

Reports on bus, truck and air transportation accounts, water line accounts and refrigerator carline accounting were received as information. All other reports were adopted as presented, and substantially as printed in the agenda for the meeting; those on freight, passenger, disbursements and terminal companies' accounts were supplemented by additional remarks by the chairmen of the several committees.

"Foremost Problem"

Mr. Peterson, for the freight committee, declared that "the foremost of the problems with which freight auditors are confronted today are the mounting costs and complexities of apportioning interline freight revenue and applying present day freight tariffs and the multitude of supplements to the currently moving freight traffic." Stating that these are also management problems, he asserted that "the greatest opportunity of all for economies in interline freight accounting still remains ahead of us relatively undeveloped. . . . This opportunity exists in connection with publication of divisions of revenue accruing to each participating carrier out of the joint through freight rate, in such a reasonably simple form that they can be readily understood and interpreted by the average clerk in a freight auditor's office."

He advocated, as "the only answer to the problem," the "publication of divisions on an origin to destination basis, in straight percentage form," and predicted a saving "of at least 50 per cent" in the cost of interline accounting "from such division publications."

Mr. Sharpe reviewed the history and present status of efforts to "streamline" interline passenger tickets, with emphasis on experimental forms of tickets now being tried out by several railroads, "with favorable response from passengers, ticket sellers and conductors." Expressing enthusiasm about the ground already covered in these experiments, Mr. Sharpe urged that they be continued, but that "the scope of the project be enlarged to a nation-wide scale . . . to bring all railroads into agreement as to the type of interline ticket to be used. Standardization and uniformity must be the keynote to make this project a complete success." Any form of ticket finally adopted, he cautioned, should be devised to fit into modern machine accounting methods.

Problems facing disbursement accounting officers were the subject of Mr. Nelson's supplementary statement. "Most important" of these, he said, is the increase in the amount of income taxes withheld from wages for cities, boroughs, school districts and other local government units. Other actual or potential problems include changes in rules or working conditions of employees; the possibility of payroll deductions for union dues, fees and assessments; the demand for detailing of payroll deductions on check stubs, and for having money for cashing checks available at places of payment; and weekly pay bills.

While he discussed each of these points in detail, and recommended ways to mitigate the effect of each, he expressed the opinion that the general problem required the railroads to "adhere to a uniform line of policy and procedure" with respect to legislation which would increase disbursing expenses, and to take full advantage of the "efficiencies and productivity achieved by scientific management and production control techniques." Like other speakers, he urged that each railroad "study what it is doing in the line of clerical work and make sure it is making the fullest use of methods and equipment now available to help cut costs."

Mr. Bresnahan, for the Committee on Terminal Companies' Accounts, asked that line-haul railroads which use facilities of switching and terminal companies "consider curtailment" of "elaborate details" sometimes required in support of monthly bills and "rely on audit of accounts for determination of proper allocation of expenses," with the object of reducing the clerical costs incurred by the terminal roads.

Official attendance figures showed a total of 930 registrations, including 330 active and honorary members, 252 guests and 348 ladies.

The accompanying exhibit was, like the attendance, one of the largest on record, with the following 22 companies participating:

Alexander & Alexander, Inc.
Burroughs Adding Machine Company
A. B. Dick Company
Thomas A. Edison, Inc.
Felt & Tarrant Manufacturing Co.
Friden Calculating Machine Company
General Register Corporation
International Business Machines Corporation
McBee Company
Monroe Calculating Machine Company
National Cash Register Company
Peirce Wire Recorder Corporation
Pick-S
Railway Age
Recordak Corporation
Remington Rand, Inc.
Sanford Electronics Corporation
Sortergraf Company
Standard Manifold Company
Standard Register Company
Visirecord, Inc.
Webster-Chicago Corporation

G. H. Albach, comptroller of the N. Y. C., was chairman of the committee on arrangements for the convention.

Severs New Chairman

At the closing session J. W. Severs, vice-president, finance and accounting, of the Chicago, Milwaukee, St. Paul & Pacific, who has been first vice-chairman for the past year, was elected chairman of the division, to succeed Mr. Jessee. Elmer Hart, comptroller of the Pennsylvania, was advanced from second vice-chairman to first vice-chairman; and L. F. Ormond, vice-president of the Atlantic Coast Line, was elected second vice-chairman.

It was voted to hold the 1952 meeting of the division in the Hotel Statler, Detroit, Mich., June 23-26.

Temporary bridging over trench being excavated for the installation of electric cells for measuring soil pressures in the roadbed under passing trains. Excavation will be backfilled and pressure readings made before and after grouting

GENERAL NEWS

Nine-Months Capital Expenditures Expected to Top 1950's 12-Months Total

I.C.C. bureau summarizes railroad estimates indicating that outlays in first three-quarters of this year will total $1,073 million; "Monthly Comment" also has articles on dining-service deficits of 1950, and shifts in tonnage and revenue by commodity groups

Class I line-haul railroads expect that their gross capital expenditures in this year's first nine months will total $1,073 million, which would top last year's 12-months total of $1,066 million. This was shown by estimates submitted to the Interstate Commerce Commission's Bureau of Transport Economics and Statistics and summarized in the latest issue of the bureau's "Monthly Comment."

The issue also contains other articles on the 1950 results of dining-service operations, the shifts since 1929 in the proportions of tonnage and freight revenue by commodity groups, and the passenger loads of rail, bus, and air carriers.

The capital-expenditures estimates were based on actual outlays made during this year's first quarter by 131 roads, and estimates for the second and third quarters which were submitted by 127 of them. The four roads which did not submit estimates for the third and fourth quarters made first-quarter expenditures totaling $7.2 million.

The estimates are summarized in an accompanying table, reproduced from the "Comment." They indicate that outlays for this year's first nine months will be on a basis 39.8 per cent above the comparable 1950 level. If that rate of increase should prevail for the entire year, the 1951 total of expenditures would be about $1,490 million—an all-time peak, topping the previous record of $1,312 million established in 1949.

This high level of this year's actual and prospective expenditures "may have been affected by the issuance of certificates of necessity by the Defense Production Administration, authorizing accelerated amortization of railroad facilities for tax purposes," the I.C.C. bureau suggested.

The diner-service figures showed that it cost the railroads $1.384 in 1950 to produce $1 of revenue from dining and buffet operations, as compared with $1.392 in 1949. These costs include only "direct expenses"—nothing for the cost of transporting dining cars or "overhead" costs.

The 1950 revenues from dining and buffet services totaled $69,843,000, while the direct expenses totaled $96,673,000. The comparable figures for 1949 were $72,904,000 and $101,515,000. Thus 1950's loss of $26.8 million was less than the 1949 deficit by $1.8 million.

An accompanying table, reproduced from the "Comment," shows these revenue and expense figures for 21 large roads (those reporting more than $1 million of diner and buffet revenues or expenses in 1950). In discussing this showing, the bureau noted that the 1950 ratios ranged from 112.8 per cent in the case of the New York, New Haven & Hartford to 183.5 per cent for the Union Pacific. The U.P. also had the highest ratio (185.4 per cent) for 1949, when the Southern had the lowest (109.7 per cent).

The article on tonnage and revenue shifts by commodity groups shows that the Products of Mines group accounted for 55.1 per cent of the total tonnage originated in 1929, 1939 and 1950, and 53.3 per cent in 1949. As for the proportion of freight revenue, however, this group accounted for 22.8 per cent of the gross in 1949 and 24.5 per cent in 1950, as compared with 28 per cent in both 1929 and 1939.

The Manufactures and Miscellaneous group, which accounted for about one-fourth of the tonnage originated in 1929 and 1939, increased its proportion to more than 27 per cent in 1949 and 1950. As to freight revenue, the 1950 proportion for this group was 47.73 per cent of the total as compared with 35.14 per cent in 1929, 38.18 per cent in 1939, and 45.97 per cent in 1949.

As for the other four groups, the 1950 proportions of tons originated and gross freight revenue, respectively, were as follows: Products of Agricul-

Actual and Estimated Gross Capital Expenditures
Class I Steam Railways

Period	Number of roads	Road	Equipment	Total	Per cent of total: Road	Per cent of total: Equipment
		Thousands	Thousands	Thousands		
Actual 1950:						
1st quarter	131	$53,412	$159,249	$212,661	25.1	74.9
1st nine months	131	194,427	573,686	768,113	25.3	74.7
Actual 1951:						
1st quarter	131	67,109	215,137	282,246	23.8	76.2
Estimated 1951:						
2nd quarter	*127	91,778	317,837	409,615	22.4	77.6
3rd quarter	*127	106,903	274,693	381,596	28.0	72.0
Total:						
1st nine months 1951, actual and estimated	—	265,790	807,667	1,073,457	24.8	75.2
Per cent of change:						
1st quarter of 1951 vs. 1950	—	+25.6	+35.1	+32.7	—	—
1st nine months 1951 vs. 1950	—	+36.7	+40.8	+39.8	—	—

*Estimate not furnished by four roads.

In the Week's News . . .

HIGHLIGHTS

N.P.A. Accused of Favoring General Motors .. 58
Report Says Seizure Benefits Only Railroads .. 59
1950 Average Car Load Equalled Record 59
Steelman Out of B.R.T. Case 60
Trucks Selection of Traffic Called Evil 60
Pictures of Erie First-Run Reenactment 61
Railroads Most Ready for Civil Defense 63
Fact-Finding Board Decision Should Stick ... 63

DEPARTMENTS

Organizations 66
Overseas 66
Car Service 67
Supply Trade 67
Equipment & Supplies 67
Construction 68
Abandonments 68
Financial 70
Railway Officers ... 72

Dining and Buffet Revenues and Expenses of 21 Large Railways
(Dollar items in thousands)

District, region and railway	Dining and buffet revenues (Account No. 131)		Dining and buffet expenses (Account No. 441)		Ratio of expenses to revenues (Percent)	
	1950	1949	1950	1949	1950	1949
Eastern district						
N.Y., N.H. & Hartford	$2,276	$2,520	$2,568	$2,966	112.8	117.7
New York Central	8,875	9,470	11,580	12,563	130.5	132.7
Baltimore & Ohio	2,380	2,440	3,458	3,804	145.3	155.9
Pennsylvania	8,745	9,311	11,376	12,727	130.1	136.7
Pocahontas region						
Chesapeake & Ohio	952	1,264	1,447	1,958	152.0	154.9
Southern region						
Atlantic Coast Line	1,819	1,688	2,144	1,993	117.9	118.1
Louisv. & Nashville	1,147	1,170	1,402	1,450	122.2	123.9
Illinois Central	1,787	1,935	2,206	2,215	123.4	114.5
Seaboard Air Line	1,603	1,673	2,025	2,121	126.3	126.8
Southern	1,845	1,895	2,186	2,079	118.5	109.7
Western district						
Chicago & No. Western	1,858	1,954	2,776	2,897	149.4	148.3
C. M. S. P. & Pac.	1,948	2,012	2,996	2,982	153.8	148.2
Great Northern	1,403	1,393	2,471	2,380	176.1	170.9
Northern Pacific	808	907	1,102	1,203	136.4	132.6
A. T. & S. F. and Affiliated Cos.	6,090	6,685	9,438	9,820	155.0	146.9
C. B. & Q.	1,905	1,867	2,820	2,844	148.0	152.3
C. R. I. & P.	1,823	1,806	2,486	2,432	136.4	134.7
Southern Pac.	6,254	6,629	8,213	8,672	131.3	130.8
Union Pac. and leased lines	4,476	4,462	8,213	8,272	183.5	185.4
Missouri Pac.	1,123	1,008	1,289	1,134	114.8	112.5
Texas & N. O.	931	790	1,176	999	126.5	126.5

Effective date	Passenger Fares in Cents Per Mile						Authority for change
	Eastern Terr.		Southern Terr.		Western Terr.		
	1st Cl.	Coach	1st Cl.	Coach	1st Cl.	Coach	
June 10, 1918	3.0	3.0	3.0	3.0	3.0	3.0	U.S.R.R. Adm. Gen. Order 28
Aug. 26 1920	3.6	3.6	3.6	3.6	3.6	3.6	Ex Parte 74
Dec. 1, 1933	—	—	3.0	2.0	3.0	2.0	(Voluntary)
Jan. 3, 1934	—	—	—	1.5	—	—	(Voluntary)
June 1, 1936	3.0	2.0	—	—	—	—	Docket 26550
Nov. 15, 1937	—	—	—	2.0	—	—	(Voluntary)
July 25, 1938	—	2.5	—	—	—	—	Ex Parte 123
Jan. 15, 1939	—	—	—	1.5	—	—	(Voluntary)
Mar. 25, 1940	—	2.0	—	—	—	—	Ex Parte 123
Feb. 10, 1942	3.3	2.2	3.3	1.65	3.3	2.2	Ex Parte 148
Oct. 1, 1942	—	—	—	2.2	—	—	Ex Parte 148
Apr. 17, 1947	[3]3.5	[3]2.5	—	—	—	—	Docket 29678
June 1, 1947	[3]3.5	[3]2.5	—	—	—	—	Docket 29711
Nov. 1, 1947	—	—	3.5	[3]2.5	—	—	Dkts. 28785 & 29796
Dec. 15, 1947	—	[1]2.875	—	—	—	—	Docket 29827
Dec. 18, 1947	—	—	—	—	3.5	—	Docket 29862
Mar. 1, 1948	—	—	—	[4]2.5	—	2.5	Dkts. 29894 & 29897
July 19, 1948	4.0	3.0	—	—	—	—	Docket 29949
Nov. 10, 1949	[5]4.66	[5]3.5	—	—	—	—	Docket 30257
Nov. 28 1949	4.5	3.375	—	—	—	—	Docket 30256

[1] N.Y. N.H. & H. R.R. only.
[2] Except N.Y. N.H. & H. R.R.
[3] Certain carriers.
[4] All other carriers.
[5] L.I.R.R. only.

ture, 9.54 per cent and 12.95 per cent; Animals and Products, 1.06 per cent and 3.39 per cent; Products of Forests, 5.82 per cent and 7.13 per cent; All L.C.L. Freight, 0.8 per cent and 4.33 per cent.

The comparisons of average passenger loads (passenger-miles per passenger-carrying-vehicle-mile) of rail bus and air carriers covered the period from 1939 through 1950. The overall railroad figures, embracing "all passenger-carrying cars," ranged from 13.4 passenger-miles per vehicle-mile in 1939 to 31.9 in 1944; 1950 figure was 18.2.

The range for bus lines was from 1939's 16.4 passenger-miles per bus-mile to 1944's 24.9. The 1950 figure, a "preliminary estimate," was 18 passenger-miles. For the air lines, the range was from 1939's 7.9 to 1950's 22.

In the latter connection, however, the I.C.C. bureau explained that airline figures for recent years reflect the use of "much larger" planes than those previously in service. Thus the article also included figures showing for the air lines the relationship of revenue passenger-miles to seat-miles flown on revenue flights. This "percentage loaded" figure rose from 56.2 in 1939 to 89.4 in 1944, and then fell off to 57.4 in 1948. It came up again to 57.9 in 1949 and 61.3 in 1950.

Because "questions are frequently asked as to changes which have occurred in the level of railroad passenger fares since World War I," the bureau prepared the answers in tabular form. That table is the third here reproduced from the "Comment."

House Group Says N.P.A. Gave G.M. Preference

The House Monopoly subcommittee has issued an "interim report" on its recent study of alleged favoritism in locomotive steel allocations.

The report accuses the National Production Authority of having made "inequitable" allocations in favor of General Motors Corporation, and charges an N.P.A. official with having issued a "grossly misleading" statement to cover up the fact.

In making these findings the report stressed that the subcommittee was not determining "at this time" whether the allocations "resulted from gross negligence, deliberate favoritism, or merely a chain of unfortunate circumstances." It did say that this locomotive incident is a "concrete example" of how the mobilization program "may lead to increased concentration of economic power."

The locomotive incident to which the committee referred was the subject of a series of hearings during the week of May 21. It involved locomotive steel allocations back in February and March, when builders were demanding "interim relief" until a regular locomotive program was set up by N.P.A.

William G. Knight, an official in N.P.A.'s Railroad Equipment Division, first told the story to the Monopoly subcommittee. According to Mr. Knight, the outcome of this "interim relief" program was that General Motors obtained 2,663 tons of steel while other locomotive builders got nothing. (*Railway Age*, June 4, page 62).

After Mr. Knight testified on May 21, N.P.A. issued a statement explaining how the mix-up occurred. This statement, from Assistant Administrator H. B. McCoy, is what the subcommittee has now called "grossly misleading."

As it issued this report, the House group also revealed that since his May 21 appearance Mr. Knight has resigned from N.P.A. "under conditions which have been described to the subcommitee as duress."

Mr. Celler's Statement

A statement issued June 8 by the subcommittee chairman, Representative Celler, Democrat of New York, declared that "such reprisals cannot be tolerated by the Congress." The subcommittee will make every effort to obtain all the facts in Mr. Knight's case and scrutinize them fully, the statement said.

Meanwhile, on June 11, the subcommittee resumed its investigation of monopoly in the mobilization program. On that date the group heard H. G. Morison, assistant attorney general in charge of the Anti-Trust Division.

Discussing the work of "industry advisory committees" in the mobilization agencies, Mr. Morison said it is the Justice Department's opinion that such committees should consist of industry representatives, rather than trade association men.

The subcommittee staff then disclosed that an advisory committee in the Defense Transport Administration is headed by Caleb R. Megee, vice-chairman of the Car Service Division, Association of American Railroads. William F. Betts, also of the C.S.D., is secretary of this committee. Other members of the committee are from the railroad industry.

At the A.A.R. it was explained that the committee is a hold-over of an old "task force" created by Colonel J. Monroe Johnson. Its work was with the National Security Resources Board,

TAKING THE LOW ROAD—FOR THE LAST TIME—a Union Pacific freight heads down the Columbia River gorge toward Portland, Ore., on the low-level track soon to be covered by backwaters from McNary dam at Umatilla. A portion of the new line, which will extend 26 miles from Hinkle, Ore., to Port Kelly, Wash., when completed, is seen at the left. Some portions of the new route, including a 2,672-foot steel girder drawbridge over the Columbia, will not be completed until next year. The entire relocation project is estimated to cost $17 million

drawing up a blueprint for a defense transport agency.

When D.T.A. was formed last year, this "task force" became an affiliate of the latter agency. In January of this year Mr. Megee succeeded C. H. Buford, former president of the Chicago, Milwaukee, St. Paul & Pacific, as chairman of the group. Since that time, however, the committee has not met, nor has the D.T.A. called on it for "consultation."

Report Declares Seizure Favors Only the Carriers

A report criticizing White House intervention in railway wage cases, and charging that government seizure of the railroads amounts to "legal fiction without substance," has been prepared by the staff of the Senate Labor and Public Welfare Committee.

"The plain and indisputable fact is that the railroads are now being operated by railroad management," while government operation is but a "symbolical gesture," the report said. It also complained that labor "carries the brunt of (government) seizure."

Based upon hearings conducted earlier this year by the Senate committee, the report is still subject to a vote by the group. The hearings were concerned with the long-pending disputes between the carriers and the four operating brotherhoods. One of the disputes, with the Brotherhood of Railroad Trainmen, has since been settled.

Senator Taft, Republican of Ohio and ranking minority member of the Labor committee, already has indicated disagreement with some parts of the report. He said he did not agree with the idea that the roads are the chief beneficiaries of a government seizure.

The proposed report also criticized the role of Dr. John R. Steelman in the rail disputes. It said Dr. Steelman "in his zeal for the public good" allowed himself to become involved in a manner "which compromised his effectiveness and has placed the President in an unnecessarily difficult position."

Commenting on White House intervention, the report said this should be the "very last resort" in labor disputes, lest the National Mediation Board become only a stop-over in the development of every dispute.

Other sections of the report expressed concern over the fact that carriers will retain profits for the period of government seizure in return for holding the government free from all liability. It was in this connection that the report said labor carries the brunt of seizure while the roads are protected from loss because no strike occurs.

The report called for two "minor amendments" to the Railway Labor Act. These would provide for the enlargement of emergency boards by adding two members, one each from the carriers and labor; and would further limit the time within which the parties must meet and commence negotiations after the filing of notices.

The National Mediation Board was commended in the report for the "patience, skill and zeal with which it endeavored to settle this dispute.

"That it has not yet succeeded is to be attributed to the recalcitrance of both parties and to the failure of the carriers to keep pace with American industry in matters of wages and hours, rather than to any defect in the act or any deficiency in its administration," the report said.

Average Car Load in '50 Equalled Past Records

Carload freight originated by Class I railroads in 1950 averaged 41 tons per car, which equalled both the wartime record established in 1943 and the average for 1947 when total of tons originated was at an all-time high. This was shown in the annual summary prepared by the Car Service Division, Association of American Railroads, from commodity statistics issued by the Interstate Commerce Commission. The average load in 1948 was 41.6 tons, but there was a decline to 40.6 tons for 1949.

The analysis was sent recently to A.A.R. member roads by C.S.D. Chairman Arthur H. Gass. His comment on the figures included an assertion that "no justification for complacency" was provided by "equalling of past records." It should be recognized, Mr. Gass explained, that average carrying capacity of freight cars "is a ton greater than it was four years ago and two tons greater than ten years ago."

Because traffic demands "will continue to be heavy," it is "important that every effort be made by both shippers and railroads to handle as much tonnage as possible in each available freight car," the C.S.D. chairman also said.

I.C.C. Won't Modify Signal Order for Illinois Central

Division 3 of the Interstate Commerce Commission has denied a petition of the Illinois Central in which the road sought permission to operate certain passenger trains up to 90 m.p.h. without the prescribed automatic train-stop or train-control system or cab-signal system.

The I.C. asked for modification of the 1947 commission order which requires roads to install appliances, methods and systems intended to promote safety of operation. The road's petition was for five of its streamlined passenger trains which now operate at maximum authorized speeds of 80 m.p.h.

The commission's denial, by Commissioner Patterson, was the twentieth report on further hearing in the No. 29543 proceeding. According to the

road, installation of the required train-stop system would cost approximately $2,216,220.

First-Quarter Truck Traffic Up 25 Per Cent

The volume of freight handled by Class I intercity motor carriers in this year's first quarter was 25 per cent above that of the comparable 1950 period, according to figures compiled by American Trucking Associations. Calling this record an "all-time high," the A.T.A. said it compared with increases of 18 per cent in the first quarter of 1950 over 1949 and three per cent in the first quarter of 1949 over 1948.

The figures were based on returns from 1,319 trucking companies which carried 45,868,372 tons of intercity freight in this year's first quarter. The comparable figure for the first quarter of 1950 was 36,800,461 tons. The A.T.A. index, based on 1941 as 100, was 267 for the first quarter as compared with 215 last year.

Steelman Out of B.R.T. Case; Stabilizers O.K. Hike

President Truman has appointed George Cheney, a labor relations consultant of San Diego, Calif., as arbitrator of the two unsettled rules issues in the wage and rules case involving railroad operating employees who are represented by the Brotherhood of Railroad Trainmen. Meanwhile, the Wage Stabilization Board has approved the wage-increase phase of the recent settlement (*Railway Age* of June 4, page 60), which gave yardmen involved a raise of 33 cents per hour and roadmen 18½ cents.

The appointment of Mr. Cheney had the effect of removing the President's assistant, Dr. John R. Steelman, from the case. In the "memorandum of agreement" signed at the White House on December 21, 1950, which was the basis of the settlement with the B.R.T., Dr. Steelman had been named as arbitrator of rules issues. Subsequent developments pointed up the B.R.T.'s opposition to having the Presidential assistant in that role. The final-settlement pact omitted reference to Dr. Steelman, and provided for arbitration of the rules issues by a Presidential appointee, who could have been Dr. Steelman, if Mr. Truman desired.

The appointee, Mr. Cheney, was formerly a member of the staff of the Department of Labor. In recent years he has been in private practice as a labor-relations consultant. He was a member of a 1948 emergency board which investigated a dispute on the Terminal of St. Louis.

The Wage Stabilization Board's clearance of the settlement's wage-increase phase was announced by the board on June 13. It was bottomed on the "base pay period abnormalities clause" of section 4 of General Wage Regulation 6. The board adopted a resolution stipulating that it approved the raise, as falling within the policy embodied in that clause, "in the light of the lengthy complex negotiation procedures provided by law for the railroad industry, as set forth in the non-operating wage case order of the economic stabilization administrator, Eric Johnston, dated April 24, 1951." (*Railway Age* of April 30, page 38.)

Bill to Separate Air Subsidies Introduced

Senator Johnson, Democrat of Colorado, who is chairman of the Senate committee on interstate and foreign commerce, has introduced a bill, S.1657, to separate payments for the transportation of air mail from subsidies paid to the air lines. Mr. Johnson said that the bill represented his views, and had not been approved by other members of the committee.

Truck Traffic Selectivity Called Evil by Knudson

The present national emergency gives the trucking industry a chance to show it can discipline itself and build up public good will, Administrator James K. Knudson of the Defense Transport Administration said in a June 11 address to the New England Motor Carriers Conference in Boston. Mr. Knudson told the motor carriers that more than any other form of transport their operations come into close contact with the people through sharing public highways.

Improved inspection systems and more careful choice of employees would enable motor carriers to reduce trucking accidents, which totaled 25,887 last year, a 15 per cent increase over 1949, he added. Mr. Knudson cited as another "evil" motor carriers' "selectivity in the acceptance of traffic."

"I am talking about the tactics—sometimes subtle and evasive and sometimes abrupt—practiced by all too many common carriers. . . . A small shipment, a shipment of light density, or a shipment subject to a low rate, is often permitted to remain on the shipper's shipping dock indefinitely awaiting the pick-up truck which never arrives. In utter frustration the shipper turns the shipment over to another mode of transportation, which is what the trucking company wanted him to do all along. Another manifestation of this evil comes to light in the attitude of motor carriers in accepting interline shipments from connecting carriers. Local traffic is more profitable. So the interline shipment lies on the dock of the inbound carrier at the interchange point until some other connection picks it up or until the original connecting carrier is light on local business.

"In both events," Mr. Knudson went on, "not only is the prohibition in the statutes against discrimination violated, but shipments are badly delayed and facilities are congested. The shipments victimized may be of the highest essentiality to the national defense, but that is beside the point. Shippers are violent in the condemnation of this failure on the part of numerous motor carriers to fulfill their common-carrier duty. Taking the 'bitter' with the 'sweet' is an accepted doctrine of older forms of transportation. Treating alike all shippers and all shipments is a key-

THE ERIE REENACTS ITS INAUGURAL RUN

(Pictures on facing page)

On May 14 and 15, as related in *Railway Age* of May 14 and May 21 (page 172), the Erie reenacted its 1851 inaugural run from Piermont, N. Y., to Dunkirk, following as closely as possible the original schedule, and reproducing many of the original local ceremonies.

The picture at the top of the facing page shows the company's present directors lined up alongside the locomotive "William Mason," which was one feature of the centennial train. From left to right, they are Amory Houghton, John A. Hadden, Edward P. Brooks, Otto D. Donnell, Paul W. Johnston, president, Robert E. Woodruff, chairman of the board, in cab, John K. Thompson, Raymond J. Wean, Henry S. Sturgis, Daniel C. Borden, Harry C. Hagerty, Col. F. C. H. Johnson, Charles H. Diefendorf and Lester R. Edwards.

At Salamanca (center left), President Johnston (at microphone) was made honorary chief Atonenis — "Railroad Builder" — by a delegation of eight Erie-employed Seneca Indians. The delegation was headed by the real Seneca chieftain standing at Mr. Johnston's left — whose own name is A. A. Jones.

The value of the Erie's enlightened personnel policies was demonstrated at Port Jervis (center right), when Car Repairman James J. McAndrew, left, and Derrick Engineer Carman Prisco, right, presented Mr. Johnston, center, with a huge basket of flowers to express the good wishes of the railroad's Port Jervis shop employees. Mr. Prisco is president of Local 962, Brotherhood of Railway Carmen of America, which represents all Erie shopmen at Port Jervis.

At Dunkirk (bottom left), the Junior Chamber of Commerce staged a pageant depicting arrival of the Erie's original train.

Small fry all along the line got a big kick out of the centennial train, and especially from the "William Mason" and Daniel Webster. (*Railway Age*, May 14, page 105). Youngsters like those at Olean (lower right), released from school for the day, made up about half the estimated total of 100,000 persons who witnessed the reenactment run.

THE ERIE REENACTS ITS INAUGURAL RUN (Captions on facing page)

stone of the regulatory statute. We have no sympathy with the motor carrier guilty of the sin of selectivity."

The D.T.A., Mr. Knudson also said, "unqualifiedly" condemns motor carrier loading which violates laws of any state. "Whether the trucker considers the weight law of any state fair or unfair is wholly beside the point," he continued. "I have said before and I say again that, from my point of view, any persistent or willful overloader should have his operating rights taken away and forever be denied the use of public highways. We have no sympathy for him and earnestly hope that the enforcement authorities of all the states will vigorously enforce compliance with their highway laws."

I.C.C. Hears Railroads Urge Higher Mail Rates

During oral argument in the mail pay case on June 7, the railroads told the Interstate Commerce Commission that present rates on mail traffic "fail drastically" to produce revenues adequate to meet the cost of providing the service.

The level of rates which will be made effective on January 1, 1951, must be high enough to yield the "fair and reasonable compensation" to which the roads are entitled, Guernsey Orcutt, chief railroad attorney, told the commission.

Mr. Orcutt's presentation pertained to the level of rates applicable to mail traffic after January 1 this year. This phase of the mail pay case (No. 9200) is now before the I.C.C. The mail pay proceeding was instituted by railroads in February 1947, but the roads and the Post Office Department have settled the so-called "retroactive phase" of the case. In that settlement the roads received an increase of about 49 per cent in mail rates for the period from February 1947 to December 31, 1950.

Continuing his argument as to the level of future rates, Mr. Orcutt declared it was never the intent of Congress that railroads carry mail at a loss. He said mail deficits "must be made up some place," and added that it is the freight shipper who, in effect, must subsidize government service.

Computed on basic 1928 rates, 1949 mail revenues would have had to be increased by 159.3 per cent to meet mail transportation expense of $461,966,134, Mr. Orcutt said.

The Post Office Department does not challenge the railroad's right to rates that will cover costs, but the department has based its findings on incomplete data and unsound principles, the railroad counsel continued. He told the commission that "meticulously accurate cost studies" have been submitted by the railroads, and declared there is "no merit" to criticisms of these cost studies.

Arne C. Wiprud, associate solicitor of the Post Office Department, presented the department's case. Among other things, he told the commission the proposed rates and charges submitted by the railroads would amount to a 168.2 per cent increase over basic 1928 mail rates. The department's proposed rates, on the other hand, would amount to a 41.9 per cent increase, Mr. Wiprud said.

News Briefs...

...The 15th anniversary of the inauguration of the first diesel-electric streamline train between Chicago and Denver over the Chicago, Burlington & Quincy was marked on May 31. In recalling the early service, Albert Cotsworth, Jr., passenger traffic manager, said that overnight service was started with two small all-coach "Zephyrs" which were replaced about six months later by 10-car "Zephyrs" featuring both Pullman and coach accommodations. In their 15 years of service, the "Denver Zephyrs" have covered approximately 11 million miles.

...The Soo Line's Chicago-Duluth overnight passenger train has been named "The Laker," and, effective June 3, has been given a faster schedule, and has been equipped with sleeping cars containing bedrooms and roomettes and a full dining-club lounge car.

...Intrastate freight rate increases totaling $200,000 a year have been granted to Missouri railroads, but requests for an additional $750,000 in increases were denied by the state Public Service Commission. To charges that Missouri intrastate rates are discriminatory, the P.S.C. said that if discrimination does exist, "it is not of our creation."

...The Santa Fe has equipped one of its San Francisco Bay tug boats with radar, and is planning to equip two more.

...A revised 163-page "Uniform Code of Operating Rules," governing operation of all Canadian railways coming under jurisdiction of the Board of Transport Commissioners, will go into effect next August 26. The new rules are essentially the same as those used on other North American railroads.

...A road test similar to the one recently completed at La Plata, Md., to determine the effect overloaded trucks have on highways, will be sponsored this summer by 12 western states. The experiment, authorized at a recent meeting of highway officials of states involved, will be conducted in Colorado. It will be jointly financed by states holding membership in the Western Association of Highway Officials.

...Coin operated telephone service on the Southern Pacific's Los Angeles-San Francisco "Lark" began on June 11.

...A total of 3,010 new freight cars was delivered to domestic railroads during May by Pullman-Standard Car Manufacturing Company. Champ Carry, chairman of the board, said this constituted the largest number of cars ever produced by the company in a single month.

...The Railroad Retirement Board has completed its annual distribution of "Certificates of Service Months and Wages" (Form BA-6). This year more than two million certificates were sent out. The form provides an identification of the railroad employee to his unemployment claims agent and also furnishes the regional office of the board handling the employee's claim with a statement of his base-year earnings, thus avoiding unnecessary delay in payment of his first claim. The board estimated the certificates should reach most railroad employees by June 30. A few certificates, which require adjustments, may be delayed until about August 1.

Bills Would Assure Steel For Railroad Rolling Stock

Bills "to assure allocations for freight cars and locomotives" have been introduced in the Senate by Senators Johnson, Democrat of Colorado, and Butler, Republican of Nebraska. The Johnson bill is S.1603 and the Butler bill S.1633.

They are identical. They would require that (except to the extent that the Secretary of Defense certified that such action was interfering with the production of articles required by the armed forces) sufficient steel and other materials be allocated to provide for the monthly construction of not less than 12,000 new freight cars and 400 new locomotives. They would also require the allocation of sufficient materials for the "maintenance in good repair of 96 per cent of the railroad freight cars and 90 per cent of the railroad locomotives."

Roads Would Speed Write-Off Of $2.2 Billion

Railroads, as of June 7, had filed 803 applications for the accelerated amortization of facilities expected to cost a total of $2,167,931,060, according to figures compiled at the Association of American Railroads. Of these applications, 172, involving facilities expected to cost $783,828,231, had been approved.

Meanwhile, 15 applications involving facilities expected to cost $29,964,446 have been denied. Thus the pending applications on June 7 totaled 616, and they involved facilities expected to cost a total of $1,354,138,383. Other figures in the A.A.R. compilation included the following:

A.A.R. Data on Accelerated Amortization

Type of Facility	Certified		Pending	
	Number	Gross Cost	Number	Gross Cost
Freight cars	83,447	$468,057,827	120,181	$633,116,595
Locomotives	1,646	262,679,937	3,403	565,568,369
Passenger cars	38	3,345,000	376	42,705,922
Miscellaneous projects	38	49,745,467	319	112,747,497

Freight Car Loadings

Loadings of revenue freight in the week ended June 9 totaled 813,326 cars, the Association of American Railroads announced on June 13. This was an increase of 68,682 cars, or 9.2 per cent, compared with the previous week; an increase of 17,285 cars, or 2.2 per cent, compared with the corresponding week last year; and an increase of 5,170 cars, or 0.6 per cent, compared with the equivalent 1949 week.

Loadings of revenue freight for the week ended June 2 totaled 744,644 cars; the summary for that week, as compiled by the Car Service Division, A.A.R., follows:

REVENUE FREIGHT CAR LOADINGS
For the week ended Saturday, June 2

District	1951	1950	1949
Eastern	126,321	124,290	118,493
Allegheny	154,594	147,061	143,152
Pocahontas	56,431	54,071	61,696
Southern	120,070	113,922	106,319
Northwestern	124,801	111,735	116,080
Central Western	107,537	107,511	100,340
Southwestern	54,890	51,306	52,744
Total Western Districts	287,228	270,552	269,164
Total All Roads	744,644	709,896	698,824
Commodities:			
Grain and grain products	37,217	37,196	40,890
Livestock	6,167	7,142	8,125
Coal	123,449	125,898	142,708
Coke	15,782	14,284	12,332
Forest products	46,165	40,944	34,946
Ore	86,222	74,368	78,174
Merchandise l.c.l.	66,476	73,460	80,099
Miscellaneous	363,166	336,604	301,550
June 2	744,644	709,896	698,824
May 26	811,799	780,926	784,824
May 19	809,475	743,313	773,910
May 12	808,217	711,789	771,738
May 5	803,337	743,996	768,327
Cumulative total 22 weeks	16,623,282	14,689,342	15,832,452

In Canada.—Carloadings for the week ended June 2 totaled 83,278 cars, compared with 79,996 cars for the previous week, and 79,108 cars for the corresponding week last year, according to the Dominion Bureau of Statistics.

	Revenue Cars Loaded	Total Cars Rec'd from Connections
Totals for Canada:		
June 2, 1951	83,278	31,405
June 3, 1950	79,108	30,707
Cumulative totals for Canada:		
June 2, 1951	1,706,324	789,321
June 3, 1950	1,552,422	668,794

Railroads Called Most Ready for Civil Defense

No group of major industries is in better shape to counteract the devastation of an atom bomb attack than railroads and other key transportation agencies, Maj. Gen. John L. Homer, Illinois deputy director of civil defense, told the National Defense Transportation Association at a June 6 luncheon meeting in Chicago. Gen. Homer also said that civil defense protective measures taken by railroads and airlines operating in Illinois are setting the pattern for national defense authorities, as well as those in other states.

"One of the most effective defensive protective measures to be taken prior to an enemy attack is the dispersion of facilities," he said. "In the case of the railroads of the United States, this is in existence now, and we start off with an accomplishment difficult to attain in other industries. In Illinois, the dispersal of railway facilities is such as to make it impossible for any long range enemy bombing effectively to interfere even to a minor degree with railway operations. Our airlines are equally mobile. The railroad and other transportation industries in their personnel organization present a highly trained and well disciplined unit, already accustomed in peacetime to meet disasters and emergencies of greater extent than that presented by the possibility of hostile bombs in this area."

Passenger Trains Collide; Six Employees Killed

A head-on collision between two Louisville & Nashville passenger trains —the northbound "Pan American" and a local—occurred at Palmyra, Tenn. (near Clarksville) on June 6, causing the death of six employees and injuries to 15 passengers. Both trains were diesel-powered and the impact of collision is reported to have virtually welded the two locomotives together. Baggage cars of both trains telescoped under the impact, but all other cars of both trains were only slightly damaged.

The cause of the accident was not immediately determined. According to preliminary reports, the "Pan American" apparently over-ran a "meet" with the local at Hematite, some 3 miles from the point of the accident. The dead included the engine crews of both trains, a baggageman and a diesel instructor on the local.

Fact-Finding Board Decision Should Be Binding—Loomis

Present laws should be amended to make reports of presidential fact-finding boards, in disputes on rates of pay, rules or working conditions, "final and binding," Daniel P. Loomis, chairman of the Association of Western Railways, said in a talk before the Central Western Shippers Advisory Board in Colorado Springs, Colo., on June 12. The speaker added that refusal of railroad unions in the past ten years to accept these boards' recommendations or even White House terms, has forced railroads to agree with the proposal for compulsory arbitration, although they do so "with considerable reluctance."

Mr. Loomis pointed out that several railroad labor disputes in the past were settled by a compulsory process. Passage of the Adamson Act (eight-hour law) in 1916, under threat of a railroad strike, "was nothing more nor less than an adjudication by the Con-

A NEW PASSENGER STATION FOR OTTUMWA, IOWA—Utilizing nothing but the walls of the former structure, the Burlington has erected this new passenger station and office building at a cost of $400,000. Waiting rooms are on the lower level in the foreground while mail, baggage and express facilities are at the extreme left. The second floor contains certain divisional offices. Final landscaping had not been completed when this picture was taken a day or so before the dedication on May 26. On the same day, the city of Ottumwa dedicated a new park which adjoins the station on the "town" side

gress itself of the questions in dispute." In the 1941 wage case "considerable pressure was exerted by the government to bring about a settlement. In the 1943 wage case the government had to take over the railroads and the President himself had to make an arbitration award in the case of two unions and retain control of the railroads until the other unions agreed to settle on the same basis." In the 1946 and 1948 cases, as well as in the present dispute with operating employees, government intervention has constituted, according to the speaker, virtual arbitration.

"With this factual situation," he went on, "it would seem clearly preferable to apply the judicial process to railway labor disputes and have decisions made which are based upon an adequate record, substantial evidence, and a full opportunity to all parties to present all the evidence and argument which they desire."

Mr. Loomis mentioned "unjust provisions" in the Railroad Unemployment Insurance Act as a factor encouraging strikes. Under that act, employees on strike are entitled to unemployment insurance. The fund from which this is paid is made up wholly of money contributed by the railroads. "Thus the employees are able to finance the strike against the railroads with the railroads' own money."

Harrison Gets Top Labor Post in Defense Set-Up

George M. Harrison, president of the Brotherhood of Railway Clerks, took his oath of office on June 8 as special assistant to Charles E. Wilson, director of defense mobilization. Appointment of Mr. Harrison, who is also a vice-president of the American Federation of Labor, was designed to meet organized labor's demand for representation at the top level of the defense set-up.

Mr. Wilson was asked at a June 12 press conference if he had assigned any "specific duties" to Mr. Harrison. The mobilization director said he didn't think Mr. Harrison was yet available for specific duties. He explained that he understood Mr. Harrison was leaving soon for a European trip which would keep him away for a month. When he returns, Mr. Wilson added, we'll still have the welcome mat out for him and talk about specific duties."

More Federal Regulation Of Railroads Foreseen

Limits to which federal laws governing transportation will go have not yet been reached, Andrew H. Brown, transportation commissioner, Cleveland Chamber of Commerce, told the recent quarterly meeting of the Great Lakes Regional Advisory Board in Cleveland.

"The constantly increasing restrictions under which railroads have operated for over 60 years have had a serious effect," he added. "We seem to have two general types of railroad executives—one which endeavors to meet the customers' needs and is unduly restricted in the attempt, and another which avoids undue restriction by failing to undertake anything at all. Without doubt there has been a tendency during the past two or three generations of railroad men to develop a 'no' complex. It is far easier to take refuge in the proscriptions of the law than to try to figure out how to change outmoded practices."

Describing what he called the "ever-increasing tendency" of the Interstate Commerce Commission "to enter the field of direct carrier management by issuance of mandatory rules after general investigations which seem to have been instituted to develop the rules," Mr. Brown said: "Regrettably, shippers, railroads and other regulated carriers have all been guilty of inviting such undertakings. We ourselves have helped the camel to begin its entrance. I might add that our system of private railroad operation, while the most efficient, and functioning at the lowest aggregate cost, of any country, is still a sort of hybrid, neither wholly private nor wholly public, half slave and half free, a situation that involves many difficulties."

C. R. Megee, vice-chairman, Car Service Division, Association of American Railroads, told the meeting that construction of new freight cars in

Selected Income and Balance-Sheet Items of Class I Steam Railways in the United States

Compiled from 127 reports (Form IBS) representing 131 steam railways
(Switching and Terminal Companies Not Included)

United States

Income Items	For month of February 1951	For month of February 1950	For the two months of 1951	For the two months of 1950
1. Net railway operating income	$18,958,789	$14,772,247	$96,670,700	$47,656,154
2. Other income	17,513,918	16,713,079	37,150,512	36,897,624
3. Total income	36,472,707	31,485,326	133,821,212	84,553,778
4. Miscellaneous deductions from income	4,126,335	2,620,142	8,631,771	6,304,208
5. Income available for fixed charges	32,346,372	28,865,184	125,189,441	78,249,570
6. Fixed charges:				
6–01. Rent for leased roads and equipment	7,884,224	8,778,273	17,703,382	17,305,564
6–02. Interest deductions[1]	24,719,649	25,037,916	49,545,438	49,872,320
6–03. Amortization of discount on funded debt	215,235	205,509	431,632	407,874
6–04. Total fixed charges	32,819,108	34,021,698	67,680,452	67,585,758
7. Income after fixed charges	d472,736	d5,156,514	57,508,989	10,663,812
8. Other deductions	3,045,579	3,161,444	6,080,731	6,392,330
9. Net income	d3,518,315	d8,317,958	51,428,258	4,271,482
10. Depreciation (Way and structures and Equipment)	36,262,399	34,842,685	72,704,323	69,632,976
11. Amortization of defense projects	1,662,582	1,374,594	3,561,342	2,758,084
12. Federal income taxes	20,917,350	10,147,574	78,088,938	26,796,941
13. Dividend appropriations:				
13–01. On common stock	22,335,570	20,983,673	32,391,552	26,487,842
13–02. On preferred stock	32,356,968	14,308,456	39,121,663	18,354,889
Ratio of income to fixed charges (Item 5 ÷6—04)	.99	.85	1.85	1.16

United States

Selected Expenditure and Asset Items	Balance at the end of February 1951	Balance at the end of February 1950
17. Expenditures (gross) for additions and betterments—Road	$42,162,905	$34,144,986
18. Expenditures (gross) for additions and betterments—Equipment	123,367,130	99,299,213
19. Investments in stocks, bonds, etc., other than those of affiliated companies (Total, Account 707)	475,746,817	475,574,174
20. Other unadjusted debits	104,093,649	103,456,609
21. Cash	946,807,024	845,161,499
22. Temporary cash investments	1,040,191,972	768,420,568
23. Special deposits	118,532,134	109,313,162
24. Loans and bills receivable	1,644,954	1,090,205
25. Traffic and car-service balances—Dr.	48,341,204	37,993,502
26. Net balance receivable from agents and conductors	170,128,179	117,150,485
27. Miscellaneous accounts receivable	450,339,102	265,073,703
28. Materials and supplies	785,986,806	724,454,442
29. Interest and dividends receivable	15,374,053	15,898,785
30. Accrued accounts receivable	224,072,489	143,896,095
31. Other current assets	35,541,984	32,022,774
32. Total current assets (items 21 to 31)	3,836,959,901	3,060,475,220
Selected Liability Items		
40. Funded debt maturing within 6 months[2]	$146,375,827	$125,618,738
41. Loans and bills payable[3]	4,259,000	8,838,817
42. Traffic and car-service balances—Cr.	116,942,927	79,894,787
43. Audited accounts and wages payable	588,705,977	484,434,483
44. Miscellaneous accounts payable	202,810,138	175,021,900
45. Interest matured unpaid	30,506,668	32,296,187
46. Dividends matured unpaid	10,636,007	8,735,739
47. Unmatured interest accrued	93,851,800	93,251,718
48. Unmatured dividends declared	71,326,733	49,164,774
49. Accrued accounts payable	223,204,977	167,349,182
50. Taxes accrued	943,302,485	566,262,889
51. Other current liabilities	94,128,182	84,040,173
52. Total current liabilities (items 41 to 51)	2,379,674,894	1,749,29,649
53. Analysis of taxes accrued:		
53–01. U. S. Government taxes	795,590,837	430,857,751
53–02. Other than U. S. Government taxes	147,711,648	135,405,138
54. Other unadjusted credits	276,851,069	257,573,694

[1] Represents accruals, including the amount in default.
[2] Includes payments of principal of long-term debt (other than long-term debt in default) which becomes due within six months after close of month of report.
[3] Includes obligations which mature not more than one year after date of issue.
Compiled by the Bureau of Transport Economics and Statistics, Interstate Commerce Commission
Subject to revision.

Car Surpluses and Shortages

Average daily freight car surpluses and shortages for the week ended June 9 were announced by the Association of American Railroads on June 13 as follows:

	Surplus	Shortage
Plain Box	14,814	3,199
Auto Box	6	35
Total Box	14,820	3,234
Gondola	178	3,300
Hopper	60	988
Covered Hopper	0	84
Stock	1,377	52
Flat	5	770
Refrigerator	4,815	0
Other	193	79
Total	21,448	8,507

the first five months of 1951 exceeded retirements of old cars by 10,000, the reverse of the situation during the comparable 1950 period, when retirements exceeded receipts by 20,000 cars. "We expect," he added, "that barring unforeseen conditions there will be a continuation of the net increase of new cars. By September the fleet of serviceable cars should equal that in September 1948 when carloadings of freight originated were the second largest on record." Bad orders had dropped from 127,000 in May 1950 to 86,000 in May this year, Mr. Megee said. He forecast heavy loadings during the second half of 1951 because of heavy crops and heavy movement of iron ore, bituminous coal and export coal and materials for the nation's defense program.

H. J. Comes, traffic manager, Nash-Kelvinator Corporation, was appointed first vice-president of the board to succeed Grant Arnold, resigned. J. P. Donahue, traffic manager, Detroit Steel Products Company, succeeds Mr. Comes on the executive committee. M. H. Dewitt, director of traffic, Lamson & Sessions Company, also was named to the executive committee. J. R. Rouce was appointed chairman of the l.c.l. service committee and Hugh D. Campbell, manager, transportation bureau, Detroit Chamber of Commerce, chairman of the car efficiency committee. The board's next meeting will be in Detroit, September 25-26.

Order Requires Heavy Loading of Canned Goods

I.C.C. Service Order No. 878, effective from July 1 until November 30 unless otherwise modified, requires "heavy" loading of canned goods and foodstuffs in packages. The commission's action was taken upon recommendation of the Defense Transport Administration, according to a D.T.A. statement which also said the recommendation was made after "consultation with the industries affected."

The order provides that no railroad shall accept for transportation (except to complete loading) any carload shipment of "canned goods and foodstuffs, canned, preserved or prepared (not cold-pack or frozen) in packages" unless cars are loaded (1) up to marked capacity in pounds as stenciled on the car, or (2) to full visible capacity but not less than 65,000 lb.

When cars are stopped off to complete loading, they must be loaded in accordance with the foregoing requirements when leaving the stop-off point. Canned goods in glass containers of one quart or less, in cartons, must be loaded to not less than six tiers high, covering the entire floor space. Similar containers of more than one quart must be loaded in five tiers.

The order has provisions for issuance of permits exempting shipments from its requirements. The permit agent is Howard S. Kline, chief of the Car Utilization Section of the commission's Bureau of Service, Room 5135. I.C.C. Building, Washington, D. C.

I.C.C. Grants More Time For AB Brake Installations

Division 3 of the Interstate Commerce Commission has given railroads and other car owners more time to complete installation of AB brakes on their freight cars. A June 5 order in the No. 13528 proceeding set back the deadline date for six months—from December 31, 1951, to June 30, 1952.

The order will also prohibit movement after June 30, 1952, of any unequipped car owned by a railroad—"unless such car is received in interchange from a line other than the owning line or unless such car is moved over its own rails by an owning line." After December 31, 1952, any movement of any unequipped car "used in freight service (including the cars of private car line companies)" will be prohibited.

"Geographical Equality" Bill Opposed by I.C.C.

Chairman Splawn of the Interstate Commerce Commission has submitted a letter to the Senate Interstate and Foreign Commerce Committee stating the commission's opposition to legislation that would provide "geographical equality" in appointments to the I.C.C.

The commission feels that members appointed to provide geographical equality would be apt to represent the interests of a particular part of the country, "somewhat as a lawyer represents a client," Chairman Splawn said. The chairman said also that the necessity of making appointments from particular sections might at times prevent selection of men best fitted for the work by training, experience, ability and character.

Senator Johnson, Democrat of

EUROPE'S FIRST INTERNATIONAL FREIGHT CAR POOL was scheduled to begin operations on May 1 with 100,000 cars for common French-German use, following the recent signing of an agreement between the railways of the two countries. For the first time, one European nation will now be able to use freely rolling stock built and owned by another, for as long as necessary, without having to return empty cars to their home country. The new car pool is expected to ease freight car shortages; to lead to eventual standardization of cars between the two countries; and to contribute to economic integration of western Europe, especially if, as is hoped, railways of other countries join the pool. The pool car shown here bears the designation EUROP above the owner's system initials SNCF (Société Nationale des Chemins de Fer)

Colorado and chairman of the Senate committee, had requested the I.C.C.'s views on a bill recently introduced by 13 senators from states in Official territory. The bill, S. 1574, would amend the Interstate Commerce Act to provide that no more than four of the commission's members shall be appointed from the same "geographical area." (*Railway Age*, June 11, page 77).

Edwards Will Become N.M.B. Chairman July 1

Leverett Edwards has been designated by the National Mediation Board as its chairman for the 12-month period beginning July 1. The designation was pursuant to the board's policy of rotating the chairmanship annually among its three members. Mr. Edwards will succeed John Thad Scott, Jr., who will continue as a member of the board.

House Group Concludes Retirement Act Hearings

The House Interstate and Foreign Commerce Committee on June 6 concluded three weeks of hearings on proposals to amend the Railroad Retirement Act. Principal bills under study by the House committee were H.R. 3669, sponsored by the "non-ops," and H.R. 3755, sponsored by the operating brotherhoods.

Hearings before the House group paralleled those recently held in the Senate by a subcommittee of the Senate Labor and Public Welfare Committee. Those hearings, conducted by Senator Douglas, Democrat of Illinois, were concerned with S. 1347, the "non-op" bill, and S. 1353, the "op" bill. (*Railway Age*, May 28, page 49, and May 21, page 170).

In each case, the "op" bill generally proposes an increase in benefit payments to retired employees. The "non-ops" urge larger benefits for both retired employees and survivors. In addition, the latter group recommends increasing taxable monthly income from $300 to $400, and asks that employees with less than 10 years service have such service credited under the Social Security Act, rather than railroad retirement.

OVERSEAS

Thailand. — The Economic Cooperation Administration has authorized use of $1,064,500 in United States funds to help Thailand's Royal State Railway maintain its rolling stock; and an additional $48,000 to send two American railway specialists to advise the Thai government on railway problems and an American railway accountant to introduce modern methods of accounting and depreciation control for the newly created autonomous state railway corporation. The larger allotment of E. C. A. funds is intended to cover emergency procurement of railway repair materials, in coordination with a longer range shop reconstruction and modernization program being financed with part of a $3 million loan from the International Bank for Reconstruction and Development. About 150 of the 2,000-mile Thailand Railway's 400 locomotives, and 1,500 of its 6,000 freight cars, are said to be in bad order, with 100 locomotives and 1,000 freight cars requiring major repairs. The I. B. R. D. loan will be spent principally upon the Makasan shops, near Bangkok, which are the central rolling stock maintenance facilities, but which were badly damaged during the war.

ORGANIZATIONS

The **Transportation Club,** Rochester, N. Y., will hold a round table meeting on the subject of freight loss and damage, on June 21, at 12:15 p.m., in the Chamber of Commerce.

The seventh annual convention of the **National Association of Railway Business Women** will be held at the Nicolett Hotel, Minneapolis, Minn., on June 22, 23 and 24. G. A. MacNamara, president of the Minneapolis, St. Paul & Sault Ste. Marie, will be the principal speaker. Included in the program is the election of new national officers.

The **Railway Business Women's Association of Metropolitan New York** will hold its last meeting of the season on June 26, at 6 p.m., at the railroad branch, YMCA, 224 East 47th street, New York. The program for this meeting is "supper, swimming and a get-together."

Meetings & Conventions

The following list gives names of secretaries, dates of next or regular meetings and places of meetings.

AIR BRAKE ASSOCIATION.—Lawrence Wilcox, Room 827, 80 E. Jackson Blvd., Chicago 4, Ill. Annual meeting, September 17-19, 1951, Hotel Sherman, Chicago, Ill.

ALLIED RAILWAY SUPPLY ASSOCIATION.—C. F. Weil, American Brake Shoe Company, 6th floor, 109 N. Wabash Ave., Chicago 2, Ill. Exhibit in conjunction with meeting of Coordinated Mechanical Associations, September 17-20, 1951, Sherman Hotel, Chicago, Ill.

AMERICAN ASSOCIATION OF BAGGAGE TRAFFIC MANAGERS.—E. P. Soebbing, 1450 Railway Exchange Bldg., St. Louis 1, Mo.

AMERICAN ASSOCIATION OF PASSENGER TRAFFIC OFFICERS.— B. D. Branch, C.R.R. of N. J., 143 Liberty St., New York 6, N. Y. Annual meeting on board Georgian Bay Line Cruise Ship, S. S. South American enroute Detroit to Chicago, September 15-18, 1951.

AMERICAN ASSOCIATION OF RAILROAD SUPERINTENDENTS.—Miss Elise La Chance, Room 901, 431 S. Dearborn St., Chicago 5, Ill.

AMERICAN ASSOCIATION OF TRAVELING PASSENGER AGENTS.—C. A. Melin, P. O. Box 5025, Cleveland 1, Ohio. Annual meeting, September 14-15, 1951, Olympia Hotel, Seattle, Wash.

AMERICAN RAILWAY BRIDGE AND BUILDING ASSOCIATION.—Miss Elise La Chance, Room 901, 431 S. Dearborn St., Chicago 5, Ill. Annual meeting, September 17-19, 1951, Hotel Stevens, Chicago, Ill.

AMERICAN RAILWAY CAR INSTITUTE.—W. C. Tabbert, 19 Rector St., New York 6, N. Y.

AMERICAN RAILWAY DEVELOPMENT ASSOCIATION.—J. G. Dugan, Terminal Railroad Association of St. Louis, St. Louis, Mo.

AMERICAN RAILWAY ENGINEERING ASSOCIATION.—Works in cooperation with the Association of American Railroads, Engineering Division—Neal D. Howard, 59 E. Van Buren St., Chicago 5, Ill. Annual meeting, March 11-13, 1952, Palmer House, Chicago, Ill.

AMERICAN RAILWAY MAGAZINE EDITORS' ASSOCIATION.—W. B. Grumley, Nickel Plate Road Magazine, 432 Terminal Tower, Cleveland 1, O. Annual meeting, November 1-3, 1951, Greenbrier Hotel, White Sulphur Springs, West Va.

AMERICAN SHORT LINE RAILROAD ASSOCIATION.—C. E. Huntley, 2000 Massachusetts Ave., N. W., Washington 6, D. C. Annual meeting, October 2-4, 1951, Roosevelt Hotel, New Orleans, La.

AMERICAN SOCIETY FOR TESTING MATERIALS.—R. J. Painter, Asst. Secretary, 1916 Race St., Philadelphia 3, Pa. Annual meeting, June 18-22, 1951, Chalfonte-Haddon Hall, Atlantic City, N. J.

AMERICAN SOCIETY OF MECHANICAL ENGINEERS.—C. E. Davies, 29 W. 39th St., New York 18, N. Y.

Railroad Division—E. L. Woodward, *Railway Mechanical and Electrical Engineer*, 79 W. Monroe St., Chicago 3, Ill.

AMERICAN WOOD-PRESERVERS' ASSOCIATION.—W. A. Penrose, 839 Seventeenth St., N. W., Washington 6 D. C.

ASSOCIATED TRAFFIC CLUBS OF AMERICA.—R. A. Ellison, Cincinnati Chamber of Commerce, 1203 Federal Reserve Bank Bldg., Cincinnati 2, O. Annual meeting, September 24-26, 1951, Olympic Hotel, Seattle, Wash.

ASSOCIATION OF AMERICAN RAILROAD DINING CAR OFFICERS.—W. F. Ziervogel, 605 S. Ranken Ave., St. Louis 3, Mo. Annual meeting, October 2-4, 1951, Hotel Statler, St. Louis, Mo.

ASSOCIATION OF AMERICAN RAILROADS.—George M. Campbell, Transportation Bldg., Washington 6, D. C.

Operations and Maintenance Department.—J. H. Aydelott, Vice-president, Transportation Bldg., Washington 6, D. C.

Operating-Transportation Division.—L. R. Knott, 59 E. Van Buren St., Chicago 5, Ill.

Operating Section.—H. S. Dewhurst, 59 E. Van Buren St., Chicago 5, Ill.

Transportation Section.—H. A. Eaton, 59 E. Van Buren St., Chicago 5, Ill.

Communications Section.—A. H. Grothmann, 59 E. Van Buren St., Chicago 5, Ill. Annual meeting, October 2-4, 1951, Chateau Frontenac, Quebec, Que.

Fire Protection and Insurance Section.—W. E. Todd, 59 E. Van Buren St., Chicago 5, Ill. Annual meeting, October 22-24, 1951, Hotel Statler, Cleveland, O.

Freight Station Section.—W. E. Todd, 59 E. Van Buren St., Chicago 5, Ill.

Medical and Surgical Section.—H. S. Dewhurst, 59 E. Van Buren St., Chicago 5, Ill.

Protective Section.—H S. Dewhurst, 59 E. Van Buren St., Chicago 5, Ill.

Safety Section.—H. S. Dewhurst, 59 E. Van Buren St., Chicago 5, Ill.

Engineering Division.—Neal D. Howard, 59 E. Van Buren St., Chicago 5, Ill.

Construction and Maintenance Section.—Neal D. Howard, 59 E. Van Buren St., Chicago 5, Ill. Annual meeting, March 11-13, 1952, Palmer House, Chicago, Ill.

Electrical Section.—Neal D. Howard, 59 E. Van Buren St., Chicago 5, Ill. Annual meeting, September 17-19, 1951, La Salle Hotel, Chicago, Ill.

Signal Section.—R. H. C. Balliet. 59 E. Van Buren St., Chicago 5, Ill. Annual meeting, September 10-12, 1951, Edgewater Beach Hotel, Chicago, Ill.

Mechanical Division.—Fred Peronto, 59 E. Van Buren St., Chicago 5, Ill. Annual meeting, June 26-28, 1951, Congress Hotel, Chicago, Ill.

Electrical Section.—Fred Peronto, 59 E. Van Buren St., Chicago 5, Ill. Annual meeting, September 17-19, 1951, La Salle Hotel, Chicago, Ill.

Purchases and Stores Division.—John L. Timanus, Transportation Bldg., Washington 6, D. C.

Freight Claim Division.—C. C. Beauprie, 59 E Van Buren St., Chicago 5, Ill.

Motor Transport Division.—George M. Campbell, Transportation Bldg., Washington 6, D. C.

Car Service Division.—Arthur H. Gass, Chairman, Transportation Bldg., Washington 6, D. C.

Finance, Accounting, Taxation and Valuation Department.—E. H. Bunnell, Vice-President, Transportation Bldg., Washington 6, D. C.

Accounting Division.—E. R. Ford, Transportaiton Bldg., Washington 6, D. C.

Treasury Division.—E. R. Ford, Transportation Bldg., Washington 6, D. C. Annual meeting, October 31-November 2, 1951, Palm Beach Biltmore. Palm Beach, Fla.

Traffic Department.—Walter J. Kelly, Vice-President, Transportation Bldg., Washington 6, D. C.

ASSOCIATION OF INTERSTATE COMMERCE COMMISSION PRACTITIONERS.—Miss Sarah F. McDonough, Executive Secretary, 2218 I.C.C. Building, Washington 25, D. C. Annual meeting, October 4-5, 1951, Congress Hotel, Chicago, Ill.

ASSOCIATION OF RAILROAD ADVERTISING MANAGERS.—C. J. Hoy, Pennsylvania, Union Station, Chicago 6, Ill.

ASSOCIATION OF RAILWAY CLAIM AGENTS.—F. L. Johnson, Gulf, Mobile & Ohio R. R., 104 St.

Francis St., Mobile 5, Ala. Annual meeting, June 10-13, 1952, Mount Royal Hotel, Montreal, Quebec, Canada.

BRIDGE AND BUILDING SUPPLY MEN'S ASSOCIATION.—L. R. Gurley, Modern Railroads, 201 N. Wells St., Chicago 6, Ill.

CANADIAN RAILWAY CLUB.—C. R. Crook, P.O. Box 162, Montreal 3, Que. Regular meetings, second Monday of each month, except June, July and August, Mount Royal Hotel, Montreal, Que.

CAR DEPARTMENT ASSOCIATION OF ST. LOUIS.—D. W. Kramer, Relay Depot Mail Room, East St. Louis, Ill. Regular meetings, fourth Tuesday of each month, except June, July and August, Hotel DeSoto, St. Louis, Mo.

CAR DEPARTMENT OFFICERS' ASSOCIATION.—F. H. Stremmel, 6536 Oxford Ave., Chicago 31, Ill. Annual meeting, September 17-19, 1951, Hotel Sherman, Chicago, Ill.

CAR FOREMEN'S ASSOCIATION OF CHICAGO.—J. A. Dingess, 8637 South Euclid Ave., Chicago 17, Ill. Regular meetings, second Monday of each month, except June, July and August, LaSalle Hotel, Chicago, Ill.

CENTRAL RAILWAY CLUB OF BUFFALO.—R. E. Mann, Hotel Statler, McKinley Square, Buffalo 5, N. Y. Regular meetings, second Thursday of each month, except June, July and August, Hotel Statler, Buffalo, N. Y.

EASTERN ASSOCIATION OF CAR SERVICE OFFICERS.—H. C. Rochester, Canadian National, 891 Notre Dame St. West, Montreal 3, Que.

EASTERN CAR FOREMAN'S ASSOCIATION. — W. P. Dizard, 30 Church St., New York 7, N. Y. Regular meetings, second Friday of January, February, March, April, May, October and November, 29 W. 39th St., New York, N. Y.

LOCOMOTIVE MAINTENANCE OFFICERS' ASSOCIATION.—C. M. Lipscomb, 1721 Parker St., North Little Rock, Ark. Annual meeting, September 17-19, 1951, Hotel Sherman, Chicago, Ill.

MAINTENANCE OF WAY CLUB OF CHICAGO.—E. C. Patterson, 400 W. Madison St., Chicago 6, Ill. Regular meetings, fourth Monday of each month, October through April, inclusive, except December, when the third Monday, at Eitel's Restaurant, Field Bldg.

MASTER BOILER MAKERS' ASSOCIATION. — A. F. Stiglmeier, 29 Parkwood St., Albany 3, N. Y. Annual meeting, September 17-19, Hotel Sherman, Chicago, Ill.

METROPOLITAN MAINTENANCE OF WAY CLUB.—John S. Vreeland, Acting Secretary, Simmons-Boardman Publishing Corp., 30 Church St., New York 7, N. Y. Meets in February, April, October, and December. Annual outing, June 21, 1951, Out O'Bounds Aero and Golf Club, Suffern, N. Y.

MILITARY RAILWAY SERVICE VETERANS.— Carl N. Rydin, 622 Railway Exchange, Chicago 4, Ill. Annual meeting, September 21-22, 1951, Hollenden Hotel, Cleveland, O.

NATIONAL ASSOCIATION OF RAILROAD AND UTILITIES COMMISSIONERS.—Austin L. Roberts Jr., 7413 New Post Office Bldg., Washington 4, D. C. Annual meeting, October 16-19, 1951, Francis Marion Hotel, Charleston, S. C.

NATIONAL ASSOCIATION OF SHIPPERS' ADVISORY BOARDS.—John N. Lind, National Supply Company, Grant Building, Pittsburgh 30, Pa. Annual meeting, October 9-11, 1951, Hotel Cleveland, Cleveland, O.

NATIONAL DEFENSE TRANSPORTATION ASSOCIATION.—Miss Lois E. Casavant, 930 F. St., N. W., Washington 4, D. C. Annual meeting, October 8-10, 1951, Plaza Hotel, San Antonio, Tex.

NATIONAL INDUSTRIAL TRAFFIC LEAGUE. — Edward F. Lacey, 909 Kass Bldg., Washington 5, D. C. Annual meeting, November 15-16, Palmer House, Chicago, Ill.

NATIONAL RAILWAY APPLIANCES ASSOCIATION. R. A. Carr, 310 S. Michigan Ave., Chicago 4; Lewis Thomas, Asst. Secy., 59 E. Van Buren St., Chicago 5, Ill.

NATIONAL SAFETY COUNCIL, RAILROAD SECTION. — R. C. Sabens, New York, Chicago & St. Louis, Terminal Tower, Cleveland 1, O. Annual meeting, October 9-11, 1951, Chicago, Ill.

NEW ENGLAND RAILROAD CLUB.—William M. McCombs, 35 Lewis Wharf, Boston 10, Mass. Regular meetings, second Tuesday of each month, except June, July, August and September, Hotel Vendome, Boston, Mass.

NEW YORK RAILROAD CLUB.—C. T. Stansfield, 30 Church St., New York 7, N. Y. Regular meetings, third Thursday of each month, except June, July, August, September and December, 29 W. 39th St., New York, N. Y.

NORTHWEST CARMEN'S ASSOCIATION.—G. H. Wells, Northern Pacific Railway, St. Paul 1, Minn. Regular meetings, first Monday of each month, except June, July and August, Midway Club, 1931 University Ave., St. Paul, Minn.

NORTHWEST LOCOMOTIVE ASSOCIATION. — R. M. Wigfield, Northern Pacific Ry., Room 1134, G. O. Bldg., St. Paul 1, Minn. Regular meetings, third Monday of each month, except June, July and August, Midway Club, 1931 University Ave., St. Paul, Minn.

PACIFIC RAILWAY CLUB. — S. E. Byler, 121E. Sixth St., Los Angeles 14, Cal. Regular meetings, second Thursday of each alternate month at Palace Hotel, San Francisco, Cal., and Hotel Biltmore, Los Angeles, Cal.

RAILWAY BUSINESS ASSOCIATION. — P. H. Middleton, First National Bank Bldg., Chicago 3, Ill. Annual meeting, November 16, 1951, Hotel Stevens, Chicago, Ill.

RAILWAY CLUB OF PITTSBURGH.—J. D. Conway, 614 Pittsburgh Life Bldg., Pittsburgh 22, Pa. Regular meetings, fourth Thursday of each month, except June, July, August, September and December, Fort Pitt Hotel, Pittsburgh, Pa.

RAILWAY ELECTRIC SUPPLY MANUFACTURERS' ASSOCIATION.—J. McC. Price, Allen-Bradley Company, 445-447 N. LaSalle St., Chicago 10, Ill.

RAILWAY FUEL AND TRAVELING ENGINEERS' ASSOCIATION.—L. H. Peters, New York Central, Room 1213, 139 W. Van Buren St., Chicago, Ill. Annual meeting, September 17-19, 1951, Hotel Sherman, Chicago, Ill.

RAILWAY SUPPLY MANUFACTURERS' ASSOCIATION.—A. W. Brown, 60 E. 42nd St., New York 17, N. Y.

RAILWAY TELEGRAPH AND TELEPHONE APPLIANCE ASSOCIATION. — G. A. Nelson, Waterbury Battery Company, 30 Church St., New York 7, N. Y. Meets with Communications Section of A.A.R.

RAILWAY TIE ASSOCIATION. — Roy M. Edmonds, 912 Shell Building, St. Louis 3, Mo. Annual meeting, September 25-27, 1951, Netherland Plaza Hotel, Cincinnati, Ohio.

ROADMASTERS AND MAINTENANCE OF WAY ASSOCIATION.—Miss Elise La Chance, Room 901, 431 S. Dearborn St., Chicago 5, Ill. Annual meeting, September 17-19, 1951, Hotel Stevens, Chicago, Ill.

ST. LOUIS RAILROAD DIESEL CLUB.—F. C. Whitlock, Terminal Railroad Association of St. Louis, 376 Union Station, St. Louis 3, Mo. Regular meetings, second Tuesday of each month, Hotel York, St. Louis, Mo. Dinner, 6:45 P. M., meeting, 8 P.M.

SIGNAL APPLIANCE ASSOCIATION. — G. A. Nelson, Waterbury Battery Company, 30 Church St., New York 7, N. Y. Meets with A.A.R. Signal Section.

SOUTHEASTERN RAILWAY DIESEL CLUB. — H. W. Brewer, Seaboard Air Line, Jacksonville, Fla. Regular meetings, second Tuesday in February, April, June, August, October and December, 9:30 a.m., Mayflower Hotel, Jacksonville, Fla.

SOUTHERN AND SOUTHWESTERN RAILWAY CLUB. — A. T. Miller, 4 Hunter St., S. E., Atlanta, Ga. Regular meetings third Thursday in January, March, May, July, September and November, Ansley Hotel, Atlanta, Ga.

SOUTHERN ASSOCIATION OF CAR SERVICE OFFICERS—F. I. Umhau, Southern Ry., Atlanta 3, Ga. Next meeting, July 25-26, 1951, General Oglethorpe Hotel, Savannah, Ga.

TORONTO RAILWAY CLUB.—J. A. North, P. O. Box 8, Terminal 'A." Toronto 2, Ont. Regular meetings, fourth Monday of each month, except June, July, and August, Royal York Hotel, Toronto, Ont.

TRACK SUPPLY ASSOCIATION.—Lewis Thomas, Q and C Company, 59 E. Van Buren St., Chicago 5, Ill.

WESTERN RAILWAY CLUB.—E. E. Thulin, Suite 339, Hotel Sherman, Chicago 1, Ill. Regular meetings, third Monday of February, March, April and May, Hotel Sherman, Chicago, Ill.

WESTERN ASSOCIATION OF RAILWAY TAX COMMISSIONERS.—A. B. Olson, 210 South Canal St., Chicago, Ill. Regular meetings, first Wednesday of each month, Traffic Club, Palmer House, Chicago, Ill.

EQUIPMENT AND SUPPLIES

FREIGHT CARS

The **Detroit, Toledo & Ironton** is inquiring for 100 70-ton covered hopper cars.

PASSENGER CARS

The **Union Pacific** has ordered 50 passenger-train cars from the American Car & Foundry Co. at a cost of more than $6.7 million. To be built are: 14 open-section and two 4-bedroom-4-compartment-2-drawing room sleeping cars; two dining cars (each seating 72 with a 12-seat waiting section); two dormitory-kitchen cars; four 48-seat dining cars; fourteen 44-seat coaches; ten baggage and two railway post office cars. (The road's intention to purchase this equipment was reported in *Railway Age*, April 30, page 48).

LOCOMOTIVES

The **Texas & Pacific** has authorized purchase of 20 diesel-electric locomotive units, including six 1,500-hp. freight, six 1,500-hp. road-switching and eight 800-hp. switching units. When this equipment is delivered the T. & P. will have 203 diesel units and will be completely dieselized.

SIGNALING

The **Richmond, Fredericksburg & Potomac** has ordered from the Union Switch & Signal Co. material to convert wayside signaling to handle coded continuous cab signaling on 15 miles of double track between RU Tower and Alexandria, Va. The order includes coded track circuit apparatus, relays, rectifiers, transformers and housings. Field installation will be handled by railroad forces.

The **St. Louis, Brownsville & Mexico** (part of the Missouri Pacific lines), has ordered equipment from the General Railway Company for installation of an automatic interlocking at Harlingen, Tex., for control of a crossing with the Texas & New Orleans. Included in this order are type B plug-in relays and types G and ME color-light signals.

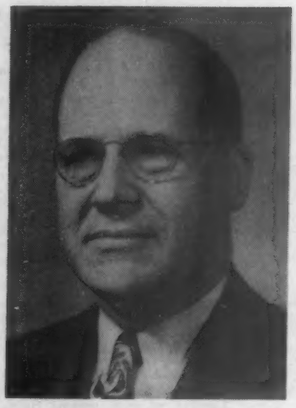
The **St. Louis-San Francisco** has ordered from the Union Switch & Signal Co. material to extend the 85-mile Newburg-Pacific Junction C.T.C. installation to Valley Park, Mo., an additional 16 miles. Necessary switch and signal levers and relays, to control the extension, will be installed in the present Newburg-Pacific Jct., style-C control machine at Springfield, Mo., division headquarters, 221 miles from Valley Park. In addition to code equipment, the order includes style H-2 high and dwarf signals, M-3 electric switch machines, SL-6A electric switch locks, rectifiers and transformers. Field installation will be handled by railroad forces.

CAR SERVICE

I.C.C. Service Order No. 872, which maintains the embargo and permit system controlling movements of export grain to New Orleans and Texas Gulf ports, has been modified by Amendment No. 3, which set back the expiration date from June 15 to October 15.

SUPPLY TRADE

J. L. Grant has been appointed chief engineer of the **P. & M. Co.**, with headquarters at Chicago. Mr. Grant joined the company in October 1918 and has served successively as draftsman, mechanical engineer and office engineer.



A. J. Couse (left), district manager of the Chicago and St. Lou is, Mo., territories for the Edgewater Steel Company, has been appointed assistant to the vice-president and general sales manager, at Pittsburgh, Pa. D. W. Odiorne (center), railway engineer, succeeds Mr. Couse as district manager, and W. O. Fleming (right), has been appointed metallurgical engineer and will assume duties previously handled by Mr. Odiorne

John C. Wallace has been appointed chief engineer for the newly created diesel parts research and development division of the Hunt-Spiller Manufacturing Corporation, as reported in last week's *Railway Age*, page 91

William E. Mott, who has been appointed a sales engineer, railway division, of the Timken Roller Bearing Company, at New York. Mr. Mott joined Timken as a railway sales trainee in February 1950, after he graduated from Rutgers University with a B. S. degree in mechanical engineering

Formation of a wholly owned subsidiary, the **Canadian Westinghouse Supply Company,** to distribute products of the **Canadian Westinghouse Company,** has been announced. **Roy L. Brown,** formerly eastern district manager of the Westinghouse Electric Supply Company in New York, has been elected executive vice-president and general manager of the new firm.

John Thomas has been appointed vice-president in charge of product engineering of the **American Locomotive Company.** Mr. Thomas, with

John Thomas

Alco for 22 years, was manager of the Auburn, N. Y., plant before his appointment in 1948 as manager of the locomotive division, at Schenectady.

The dump car, trail car and general car business which has been part of the **Austin-Western Company,** Aurora, Ill., has been transferred to Eddystone, Pa., and is being operated by the **Baldwin-Lima-Hamilton Corporation.** The assets of Austin-Western were acquired by Baldwin-Lima-Hamilton on March 8. **Jess Mossgrove,** manager of the car department of Austin-Western, remains in charge of that department.

George R. Hettinger has been appointed railroad and transport sales representative of the **Automatic Transportation Company,** Chicago.

ABANDONMENTS

Application has been filed with the I.C.C. by:

CHICAGO & NORTH WESTERN.—To abandon a 28.1-mile branch line between Plymouth, Wis., and Fond du Lac. The application stated that public convenience no longer requires operation of the branch, and that there is "urgent and continuing need for recovery of salvageable materials" from the line.

CONSTRUCTION

Atlantic Coast Line.—This road has asked I.C.C. authority to construct a 2.4-mile extension to an existing line in Polk County, Fla. The extension would permit A.C.L. to serve a phosphate chemicals plant of the International Minerals & Chemical Corporation. Cost of constructing the new line would be paid out of current funds.

Chicago & Eastern Illinois.—A contract for construction of a 42-in. conveyor belt, which will automatically remove coal from hopper pits beneath coal tracks to river barges some 360 feet away, has been awarded to the McNally Pittsburg Manufacturing Corporation, Pittsburg, Kans. The conveyor belt, which will be built on the Ohio river at Joppa, Ill., to enable coal producers of southern Illinois using C.&E.I. facilities to reach new markets along the Ohio and its

Another Big Crop Growing in M. & St. L. Territory...

THE GREAT MIDWEST

The Great Midwest, No. 1 food producing region of America, is away to a fine start for its 1951 Crops, with all signs pointing to another huge harvest this year.

Spring planting was delayed by cold, snow and rain but present soil and moisture conditions are ideal. They forecast big yields of grains, grasses and other crops, with abundant feed and pasturage for livestock.

Normal summer weather should bring harvests even greater than in 1950, in the four Midwest States served by

THE MINNEAPOLIS & ST. LOUIS RAILWAY

Bountiful harvests this year will add new wealth to the solid prosperity of Agriculture and in turn of Business and Industry in the Great Midwest.

Helping to create and maintain this prosperity will be the Fast Dependable Freight Service of the M. & St. L. Railway, specialist for 80 years in transportation of the products of fertile farms.

In 1950, Iowa, Illinois, Minnesota and South Dakota grew 1,177,103,000 bushels of corn, equal to 37 per cent of the nation's crop; 707,434,000 bushels or 48 per cent of the oats; 19,848,000 tons or 18 per cent of the hay; 19,149,000 bushels or 49 per cent of the flax seed; 154,223,000 bushels or 54 per cent of the all-time record harvest of soybeans; and as always vast quantities of wheat, barley, rye and other grains.

THE MINNEAPOLIS & ST. LOUIS RAILWAY CO. — THE PEORIA GATEWAY

The **Minneapolis & St. Louis** *Railway*

New Address: 111 East Franklin Avenue, Minneapolis 4, Minnesota • New Telephone Number: Main 7144

tributaries, is estimated to cost $250,000. The system will have a capacity of 600 tons an hour. A hinged boom section, electrically operated, will enable the system to adjust to river levels as high as the 60-ft. stage reached in the flood of 1937. Another contract covering the foundation and the hopper pits remains to be awarded.

FINANCIAL

Atchison, Topeka & Santa Fe.—*Division of Stock.*—This road has applied for I.C.C. approval of its plan to split its common and preferred stock. (*Railway Age*, May 7, page 79.) The plan contemplates issuance of 4,855,190 shares of common and 2,629,720 shares of preferred, both of $50 par value, to be exchanged on a two-for-one basis for 2,427,595 shares of common and 1,314,860 shares of preferred, both of $100 par value. The application said the change should render the stock "more attractive to the average investor," thus increasing its marketability and promoting wider distribution. It was also explained that the common and preferred stocks have equal voting rights, so both classes had to be split on the same basis to preserve this equality. The preferred's preference lies in its right to receive, before any payment is made on common, non-cumulative dividends as declared by the board of directors—but not more than 5 per cent annually.

Baltimore & Ohio.—*R.F.C. Loan.*—The Reconstruction Finance Corporation on June 8 announced that this road on that day paid $1,583,000 on its loan from the corporation. This reduced the balance owed to $74,725,000. The June 8 payment was of the collateral-redemption type, and it returned to the B.&O. a like amount of Pittsburgh, Lake Erie & West Virginia bonds which had been pledged as part of the collateral securing the loan. (*Railway Age*, June 4, page 90, and June 11, page 91.)

Central of Georgia.—*Control of Savannah & Atlanta.*—The I.C.C. has postponed, for an indefinite period, the order of its Division 4 authorizing this road to acquire the 141-mi. S. & A. (*Railway Age*, May 21, page 183). The order authorizing acquisition was issued May 10 and was to become effective June 19. Postponement of the effective date came after requests for reconsideration of the order were filed by the Georgia Railroad & Banking Company, Georgia Railroad, and Louisville & Nashville. These roads have been opposing the acquisition.

Grand Trunk Western.—*New Director.*—John Pullen, vice-president of traffic, Canadian National, was named

ANNUAL REPORTS

Railroad		Operating Revenues	Operating Expenses	Fixed Charges	Net Income	Current Assets*	Current Liabilities*	Long Term Debt*
Belt of Chicago	1950	$12,959,665	$7,887,079	$1,710,903	$184,838	$5,974,403	$3,919,088	$2,993,597
	1949	11,210,200	7,715,833	1,617,993	186,408	4,099,434	2,604,576	None
Central of Georgia	1950	39,060,944	33,381,898	591,542	2,228,096	15,243,576	6,088,933	30,077,575
	1949	34,866,066	31,729,909	589,107	19,452	9,074,716	5,216,874	29,837,331
Central of New Jersey	1950	60,156,000	47,620,000	4,245,000	2,780,000	21,477,000	11,533,000	67,348,000
	1949	54,578,000	44,977,000	4,650,000	847,080d	16,482,000	9,513,000	70,249,000
Chicago, Burlington & Quincy	1950	245,247,560	161,964,673	6,277,092	33,761,655	84,758,508	59,592,227	207,504,646
	1949	217,996,507	167,265,648	5,811,084	15,419,491	65,639,628	40,971,440	182,337,061
Chicago Great Western	1950	33,150,846	23,340,689	805,861	2,885,531	11,053,365	8,150,168	24,651,576
	1949	32,291,331	24,335,602	725,000	1,879,160	9,073,479	6,658,521	25,205,431
Chicago, New Orleans & Texas Pacific	1950	41,690,397	25,051,655	1,970,719	6,625,185	28,713,919	14,352,405	8,751,800
	1949	36,180,454	24,451,125	1,836,990	4,647,469	25,220,512	10,972,480	3,408,000
Chicago & North Western System	1950	222,659,151	186,781,598	3,030,615	10,000,544	66,907,887	48,631,161	185,009,417
	1949	204,921,772	184,285,053	2,814,278	4,086,978	56,718,308	38,794,399	186,647,279
Denver & Rio Grande Western	1950	66,123,375	47,148,643	2,356,376	8,032,184	42,651,706	17,409,172	93,048,570
	1949	65,689,065	50,539,060	2,338,827	5,878,557	36,802,361	13,862,530	92,980,390
Detroit & Mackinac	1950	2,232,360	1,157,333	81,867	500,962	968,166	682,826	2,390,727
	1949	1,928,708	1,210,389	89,135	320,216	763,041	545,564	2,572,851
Duluth, Missabe & Iron Range	1950	46,176,305	28,956,504	361,089	6,286,372	15,086,173	16,781,364	14,904,000
	1949	38,903,717	26,437,227	544,090	5,076,497	12,252,553	12,495,914	16,508,000
Erie	1950	166,190,464	121,610,079	5,150,416	15,568,583	55,417,404	39,515,193	203,743,082
	1949	149,109,906	121,568,708	5,107,483	8,095,837	39,121,862	26,658,112	202,916,742
Georgia Southern & Florida	1950	7,890,877	4,953,819	320,440	495,930	3,787,766	1,855,398	6,097,738
	1949	7,095,792	4,937,417	320,621	230,623	3,624,415	1,509,847	5,989,483
Green Bay & Western	1950	3,816,275	2,534,897	28,611	576,583	1,459,817	866,341	8,205,874
	1949	3,592,915	2,851,935	3,132	255,591	997,328	753,481	7,744,666
Great Northern	1950	227,516,257	162,124,464	7,934,336	28,184,939	102,841,674	52,868,666	264,020,188
	1949	212,267,229	161,951,808	7,692,719	18,701,616	76,503,825	39,532,752	255,270,884
Nashville, Chattanooga & St. Louis	1950	35,798,615	25,819,250	735,574	3,890,620	17,821,129	7,244,836	28,639,529
	1949	32,056,954	25,199,813	671,477	2,141,057	15,059,330	5,214,012	24,886,491
New Orleans & Northeastern	1950	12,623,862	6,231,497	350,160	2,322,113	17,414,354	5,590,147	9,005,400
	1949	10,406,526	5,855,483	326,126	1,763,172	14,831,385	4,045,457	7,195,000
New York, New Haven & Hartford	1950	150,764,985	115,075,645	4,312,460	7,467,299	41,424,977	46,814,774	208,375,421
	1949	144,690,868	117,145,462	4,402,726	2,774,888	41,189,503	42,046,512	211,831,527
Peoria & Pekin Union	1950	2,793,633	1,991,890	97,090	477,221	2,056,253	928,263	2,997,613
	1949	2,533,442	2,127,319	144,303	194,184	1,945,714	670,955	2,679,130
Pittsburgh & West Virginia	1950	8,484,258	6,635,662	542,932	1,296,582	4,408,609	1,223,927	12,102,900
	1949	7,300,212	5,836,834	550,804	581,205	2,296,905	1,561,591	12,613,572
Richmond, Fredericksburg & Potomac	1950	23,991,601	15,048,208	230,063	3,832,597	10,033,778	5,788,406	6,757,439
	1949	22,214,532	18,296,253	111,266	1,148,038	6,765,222	3,577,840	7,619,071
Southern	1950	239,906,391	168,557,964	12,817,738	22,400,042	93,338,118	73,914,879	241,475,940
	1949	212,771,707	166,438,603	12,978,774	11,914,308	76,603,624	51,991,355	252,459,380
Tennessee Central	1950	4,778,538	3,612,790	263,000	183,489	1,961,310	1,892,600	7,360,568
	1949	4,321,469	3,343,786	252,413	123,048	1,003,383	1,505,138	6,713,011
Toronto, Hamilton & Buffalo	1950	5,151,662	2,990,769	111,504	1,344,798	5,013,504	2,560,212	3,600,000
	1949	4,947,227	3,195,238	100,536	1,054,896	2,967,381	1,369,004	3,000,000

* On December 31
d-Deficit

COLOR-STYLED
FOR BETTER
PUBLIC RELATIONS

...2 good reasons for specifying

SHERWIN-WILLIAMS STATION PAINTS!

Good paint pays off two ways in railway station maintenance—in protecting investments, and in improving local "good neighbor" relationships. Sherwin-Williams Station Paints are specifically developed to meet both important requirements.

*"Weatherated"**—six characteristics involved in the weathering of exterior paints have been carefully predetermined, balanced and controlled for best results under the types of exposure encountered with railway stations. WEATHERATING protects against excessive loss of gloss; high dirt collection; uncontrolled chalking; checking and cracking; rapid erosion and color fading.

Color Styled—Sherwin-Williams Station Paints are supplied either in colors harmonizing with the environment of neighborhoods in which your stations are situated, or to meet your own color specifications.

Ask for help in selecting your requirements—specify Sherwin-Williams for two-way benefits in application! The Sherwin-Williams Co., Transportation Division, Cleveland 1, Ohio.

*A continuous laboratory testing procedure that dictates and controls the brass knuckle abilities of S-W Station Paints to fight off deterioration, decay and early repainting.

SHERWIN-WILLIAMS
RAILWAY FINISHES

Products of Sherwin-Williams Research

a director of the Grand Trunk at the recent annual meeting of directors in Detroit, Mich.

Illinois Central.—*Purchase.*—This road has been authorized by Division 4 of the I.C.C. to purchase the Chicago, St. Louis & New Orleans and to acquire direct control of the Canton, Aberdeen & Nashville, both wholly owned subsidiaries of I.C. The New Orleans company will be eliminated as a separate corporation, as a part of I.C.'s plan for simplifying its corporate and financial structure. Direct control of the Canton company, formerly held by the New Orleans company, will be transferred to the I.C.

Missouri-Kansas-Texas. — *Adjustment Bonds.*—Directors of this road have authorized payment of one coupon on the adjustment mortgage bonds. The coupon will become due and payable July 1 and is No. 53, dated April 1, 1949.

New York, New Haven & Hartford.—*New Director.*—Harold F. Freeburne, of Hamilton, Ont., has been elected to this road's board of directors to represent the common stockholders.

Reading.—*Finances New Equipment.*—This road has consummated 15-year conditional sales agreements totaling $15,108,473 with banks and insurance companies. Equipment covered by the agreements—under terms of which banks will furnish money for the first four years and insurance companies for the longer period—includes 30 diesel-electric locomotive units and 2,000 freight cars (*Railway Age*, February 19, page 50). A similar agreement for $10,088,820 was concluded by the Reading last January.

Seatrain.—*Acquisition of Ocean Steamship Company.*—The I.C.C. has authorized groups of eastern and southern railroads and the New York Port Authority to intervene in connection with Seatrain's proposal to acquire the Ocean Steamship Company from the Central of Georgia. (*Railway Age*, February 19, page 37).

The Ocean company holds a certificate authorizing operations between Savannah, Ga., and New York, but service has been suspended since 1942. The Port Authority says restoration of the New York-Savannah service "is of vital importance," and told the commission it would support Seatrain's application.

The railroads, however, oppose the transaction on grounds that service as contemplated by Seatrain "will be competitive with and detrimental to the service and interests" of the roads. The real object of Seatrain's proposal, the roads say, is to obtain a basis upon which Seatrain "may assert a legal right to render the contemplated 'Seatrain type' of service at the differential level of rates and divisions established to apply in connection with the admittedly inferior break-bulk type of service formerly rendered by the Ocean Steamship Company."

New Securities

Applications have been filed with the I.C.C. by:

PENNSYLVANIA-READING SEASHORE LINES.—To issue a note or notes in the principal amount of $1,926,000 in connection with payment of a like amount of its 4 per cent first consolidated mortgage bonds which are due July 1. Maturity would be met from proceeds of a bank loan evidenced by the proposed note or notes. The latter would bear interest at an annual rate of 2⅞ per cent and would mature May 1, 1954. The application explained that this maturity date would be the day on which another of the applicant's bond issues ($2,200,000 of 5 per cent mortgage bonds of the Atlantic City, a predecessor company) also would be due; and that the applicant wanted to be able to finance the notes and the A.C. bonds at the same time—"if that seems desirable." Meanwhile there would be provisions for prepayment of the note or notes. As for the proposed 2⅞ per cent interest rate, the Irving Trust Company's offer to lend the money on that basis was the best received, and it has been accepted subject to commission approval.

SOUTHERN PACIFIC.—To assume liability for $10,500,000 of series FF equipment trust certificates to finance in part 14 diesel-electric locomotives and 950 freight cars. Cost of the new equipment is estimated at $14,023,224.

	Description and Builder	Estimated Unit Cost
14	6,000-hp freight locomotives, each consisting of two "lead" units and two "booster" units (Electro-Motive Division, General Motors Corporation)	$663,169.00
570	50-ton box cars, steel-sheathed and wood lined (Pullman-Standard Car Manufacturing Company)	5,333.46
380	50-ton gondola cars (Southern Pacific Equipment Company)	4,470.49

The certificates, to be dated July 1, would mature in 15 annual installments of $700,000 each, beginning July 1, 1952. They would be sold on the basis of competitive bids, with the interest rate to be set by such bids.

TEXAS & PACIFIC.—To assume liability for $5,500,000 of equipment trust certificates to finance in part acquisition of 19 diesel-electric locomotives from the Electro-Motive Division of General Motors Corporation, and the building of 250 freight cars in T. & P. shops. The equipment was listed in the application as follows:

	Description	Estimated Unit Cost
6	road freight locomotives, each consisting of two 1,500-hp. "A" units and one 1,500-hp. "B" unit	$504,026
5	road freight locomotives, each consisting of two 1,500-hp. "A" units	346,206
1	1,500-hp. road freight locomotive	173,103
7	1,200-hp. switching locomotives	103,999
100	50-ton flat cars	7,945
150	70-ton, steel gondola cars	6,988

Estimated total cost of the equipment is $7,499,026.50. The certificates, dated July 1, would mature in 10 annual installments of $550,000 each, beginning July 1. They would be sold on the basis of competitive bids, the interest rate to be set by the bids.

Division 4 of the I.C.C. has **authorized:**

DONORA SOUTHERN.—To issue an unsecured installment note of $790,000 to its parent company, the United States Steel Corporation. The note, bearing interest at 2¾ per cent, will evidence funds advanced to the road in connection with its acquisition of nine diesel-electric locomotives. (*Railway Age*, May 28, page 72).

Security Price Averages

	June 12	Previous week	Last year
Average price of 20 representative railway stocks	52.74	52.27	42.64
Average price of 20 representative railway bonds	93.87	93.89	91.91

Dividends Declared

Rochester & Genesee Valley.—$2, semiannual, payable July 2 to holders of record June 21.

Seaboard Air Line.—$1, quarterly, payable June 26 to holders of record June 15.

Texas & Pacific.—common, $1.25; 5% noncumulative preferred, $1.25, quarterly, both payable June 29 to holders of record June 27.

RAILWAY OFFICERS

EXECUTIVE

J. Pat Casey has been advanced to vice-president of the ST. LOUIS, SAN FRANCISCO & TEXAS (a subsidiary of the Frisco) at Fort Worth, Tex., as reported in the June 4 *Railway Age*. Born at Denison, Tex., in 1898, Mr. Casey began his railroad career in

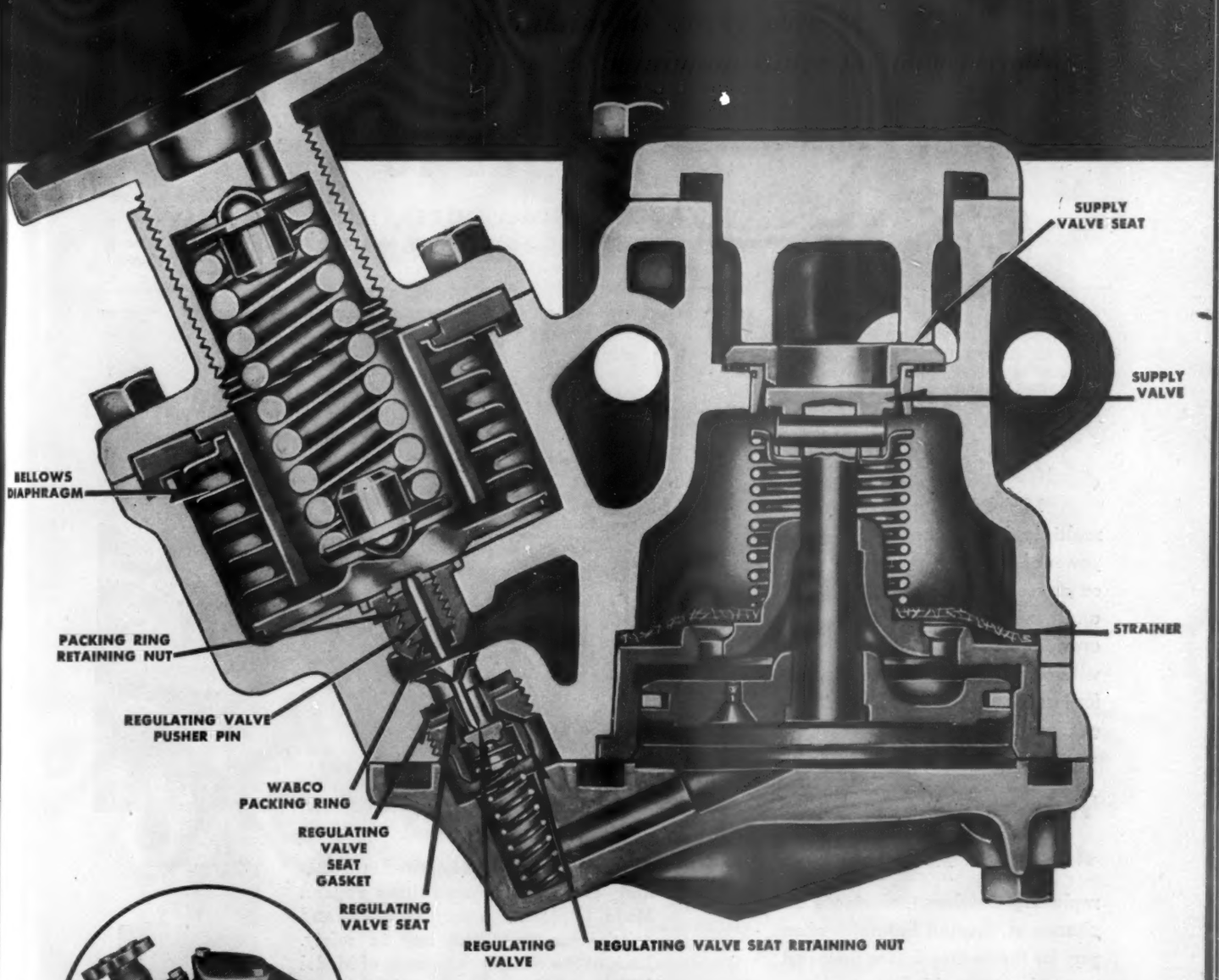
J. Pat Casey

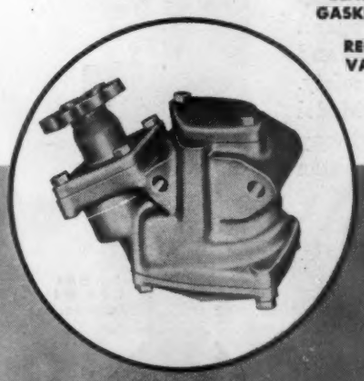
1913 as a telegrapher-stenographer on the Southern Pacific. In 1920 he joined the Frisco Texas lines as an accountant at Fort Worth. He was appointed cashier in 1925 and traffic representative in 1940, becoming traffic manager in March 1950, in which capacity he served until his promotion.

George W. Cox, who has been appointed assistant to president of the ATCHISON, TOPEKA & SANTA FE, at Chicago, as announced in the June 11 *Railway Age*, was born at King City, Mo., July 14, 1904, and attended

George W. Cox

Wichita and LaSalle Extension Universities. In July 1920 he began Santa Fe service in the agent's office at Chanute, Kan. After holding various clerical positions he became traveling freight agent in 1940. Six years later *(Continued on page 75)*





Recommended standard for use with both 24-RL and 6-SL locomotive brake equipment. This improved feed valve automatically maintains brake pipe pressure at uniform level for long periods. New features improve performance and extend life. Bellows eliminates variations in setting frequently encountered with clamped diaphragm. Disc regulating valve eliminates stem wear and consequent leakage. Smooth flowing characteristics ban diaphragm hunting. Level flow reduces air turbulence, prevents deposit of suspended oil and carbon.

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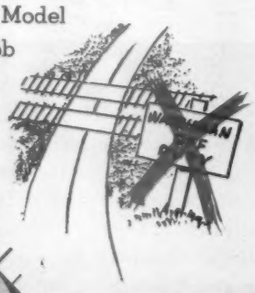

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F. L. Dennis (left), general manager of the Illinois Terminal, with headquarters at St. Louis, who has been elected vice-president in charge of operations and maintenance; and J. F. Cress (center), secretary and comptroller, and E. G. Wangelin (right), treasurer, who have been elected also vice-presidents

(Continued from page 72)
he was appointed industrial agent at Topeka, Kan., and in June 1949 was assigned to a similar post on the Gulf, Colorado & Santa Fe at Galveston, Tex., where he was located before his new appointment.

Samuel W. Fordyce has been appointed executive assistant on the president's staff of the WESTERN PACIFIC. He will perform such duties as are assigned him by the president. Mr. Fordyce comes to the W.P. from a firm of management engineers and financial consultants at Los Angeles.

As announced in the May 28 *Railway Age*, **A. L. Browne** has been elected vice-president—traffic and **Raymond C. Harrison,** vice-president—operation and secretary, of the MANUFACTURERS, the ST. LOUIS & O'FALLON and the ST. LOUIS REFRIGERATOR CAR COMPANY. Mr. Brown was born on

A. L. Browne

January 25, 1888, at St. Louis and educated in parochial schools and Christian Brothers College. He was employed by the N. K. Fairbank Company, St. Louis, from 1902 to 1918, when he joined the Manufacturers, the St.L.& O'F. and the St.L.R.C. Co. as purchasing agent. In 1919 he became general agent, and, in March 1936, assistant to president and traffic manager, holding the latter posts until his recent election as vice-president—traffic.

Mr. Harrison was born on January 2, 1890, at St. James, Mo., and attended St. Louis public schools. Prior to join-

Raymond C. Harrison

ing the three companies, he was in the service of the American Car & Foundry Co., the St. Louis-San Francisco, the Missouri-Kansas-Texas and the American Refrigerator Transit Company. He started with the Manufacturers, the St.L.&O'F. and the St.L.R.C. Co. in September 1919 as clerk in the office of assistant to president. In 1921 Mr. Harrison was appointed purchasing agent, and in 1928 was appointed assistant general manager and elected also secretary, in which positions he continued until elected vice-president—operation and secretary.

As reported in the May 14 *Railway Age*, **Paul E. Feucht,** vice-president—Western region, of the PENNSYLVANIA, has been elected executive vice-president of the CHICAGO & NORTH WESTERN SYSTEM, effective August 1. Mr. Feucht was born at Indianapolis, on January 4, 1900, and, shortly after graduation from Purdue University with a civil engineering degree in 1923, entered railroad service with the Pennsylvania. Starting as an assistant on engineering corps of the Louisville division, he subsequently held engineering positions at several locations, and in 1934 became division engineer at Fort Wayne, Ind. Promoted to superintendent of the Wilkes-Barre division in 1935, he was appointed superintendent of passenger transportation, Eastern region, the following year, and

Paul E. Feucht

in 1939 was advanced to general superintendent of the Southwestern division. Three years later Mr. Feucht was transferred to the Lake division at Cleveland, and in 1945 was further promoted to general manager, Western region, at Chicago, moving to Pittsburgh as general manager of the Central region in 1946. Ten months later he returned to Chicago as vice-president, Western region.

FINANCIAL, LEGAL & ACCOUNTING

As reported in *Railway Age* of May 7, **Bruce Dwinell** has been appointed general solicitor of the ROCK ISLAND LINES, with headquarters at Chicago. Mr. Dwinell was born on October 12,

New, Fast, Positive Fire Killer...

DRY CHEMICAL WHEELED PORTABLE FIRE EXTINGUISHER

Experienced engineering develops new, highly efficient 150-pound capacity dry chemical type wheeled portable fire extinguisher . . . has exclusive design that assures you of lasting, foolproof fire protection.

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Built-In High Pressure and Low Pressure Carbon Dioxide Type Fire Extinguishing Systems
Built-In Smoke and Heat Fire Detecting Systems

1891, at Washington, Ill., and educated at Bradley and Northwestern Universities, receiving his A.B. degree from the latter in 1914 and an LL.B. in 1916. He entered Rock Island service in December 1927 as general attorney after practicing law in Peoria, Ill., since 1916. In April 1945 he became

Bruce Dwinell

director of employee relations for the Rock Island, and in September 1946 was appointed a member of the first division of the National Railroad Adjustment Board. He returned to his former post as general attorney one year later and continued in that capacity until his new appointment.

James M. Souby, Jr., commerce attorney of the ATCHISON & SANTA FE at San Francisco, has been appointed general attorney and commerce counsel at Chicago.

L. Barnes, treasurer of the NORTHERN ALBERTA at Edmonton, Alta., has been appointed regional treasurer of the Atlantic region of the CANADIAN NATIONAL at Moncton, N. B., succeeding the late **C. R. Blakney.**

OPERATING

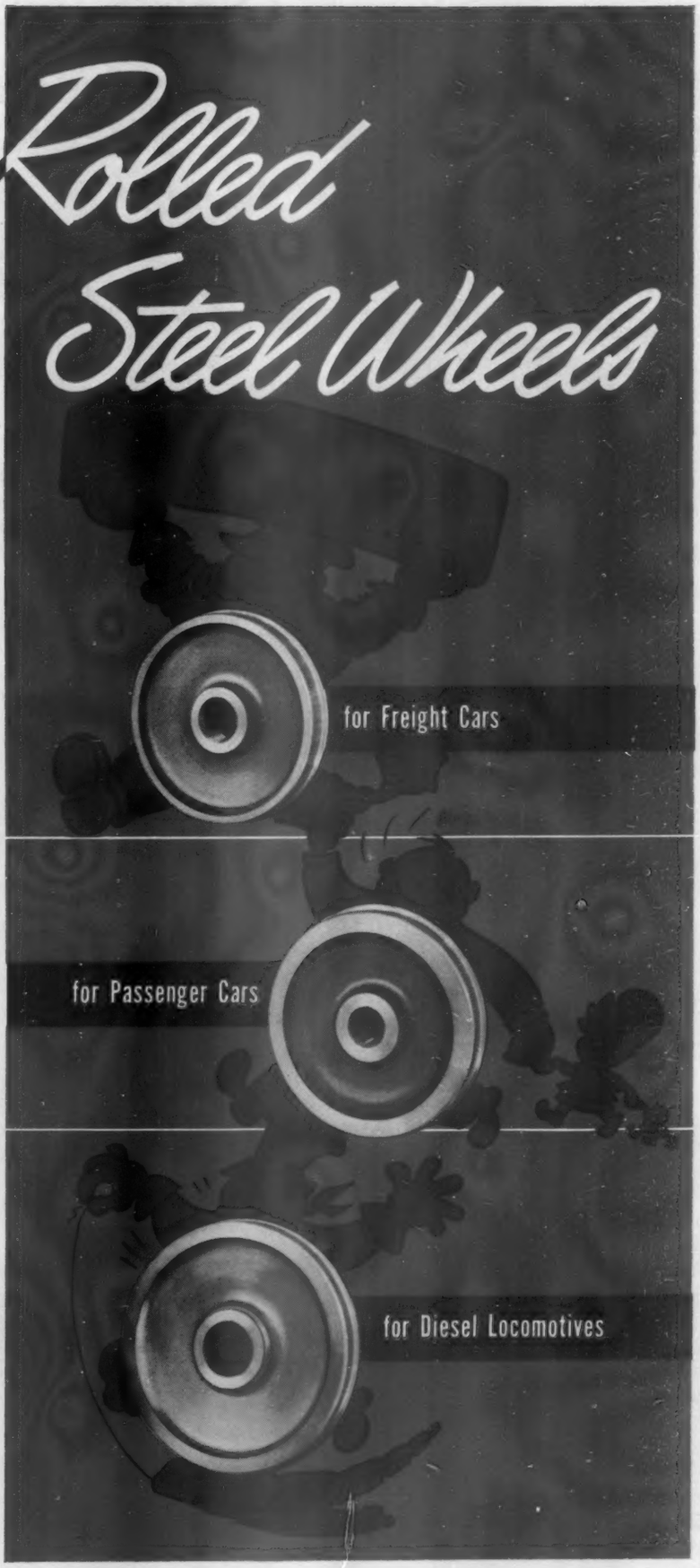
C. L. Poole, acting general superintendent of the BELT OF CHICAGO, has been appointed general superintendent, and **D. J. Clifford,** acting superintendent, has been made superintendent, both with headquarters at Clearing, Ill. Their former positions have been abolished.

R. C. Klein, assistant superintendent transportation of the READING at Philadelphia, Pa., has been appointed superintendent transportation, succeeding **C. D. Barwick,** who has been appointed assistant superintendent stations and transfers. **J. B. Warrington,** supervisor of transportation at Philadelphia, has been appointed assistant superintendent transportation.

As reported in the May 14 *Railway Age*, **A. G. McIntosh** has been promoted to superintendent transportation, Pere Marquette district, CHESAPEAKE & OHIO, with headquarters at

Edgewater Rolled Steel Wheels

Made under exacting control, from steel produced in our own plant—Heat-treated or untreated—Single wear and multiple wear . . . Made to AAR or ASTM specifications.



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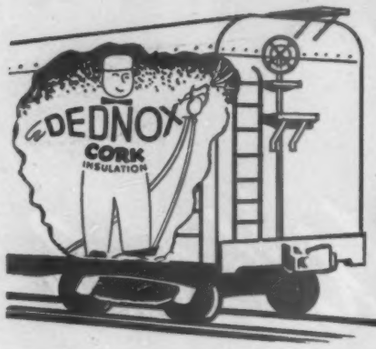

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Dednox also rustproofs and waterproofs car roofs, adding protection to the car itself and removing the possibility of food damage from scaling paint or rust.

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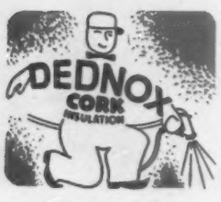

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Detroit. Mr. McIntosh was born in 1902 at Leadville, Colo., and entered railroad service as a record clerk on the Pere Marquette in August 1920. After advancing through various cleri-

A. G. McIntosh

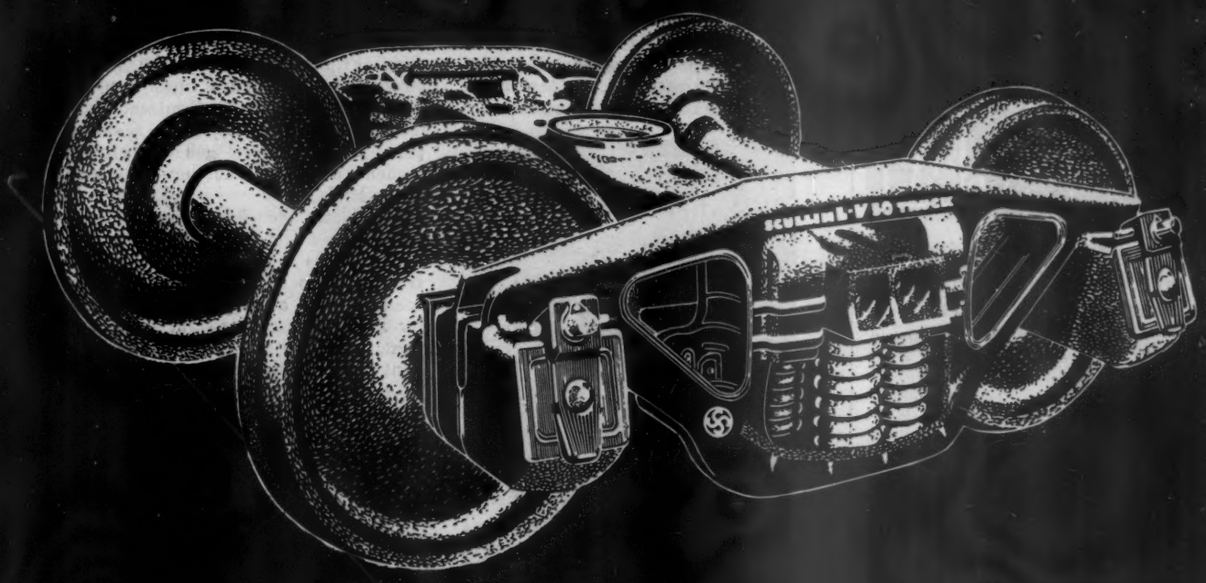
cal positions, he became general car distributor in 1938, assistant to superintendent transportation in April 1947, and assistant superintendent transportation in January 1951, from which post he has now been promoted.

As reported in *Railway Age* May 14, **A. S. Tabor** has been appointed superintendent of the Shenandoah division of the NORFOLK & WESTERN at Roanoke, Va. Mr. Tabor joined the N. & W. in August 1920 as a brakeman on the Pocahontas division, sub-

A. S. Tabor

sequently serving as relief assistant yardmaster, yardmaster and assistant trainmaster. Mr. Tabor was appointed assistant superintendent of the Pocahontas division at Bluefield, W. Va., in November 1948, which position he held until his recent promotion.

Michael Rennie Martin, assistant superintendent of the Montreal Terminals division of the CANADIAN PACIFIC, has been appointed superintendent of that division, with headquarters as before at Montreal, Que., succeeding **G. E. Mayne,** who has been promoted



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Applied with spray gun to ceilings and side walls and freight, passenger and refrigerator cars and cabooses.

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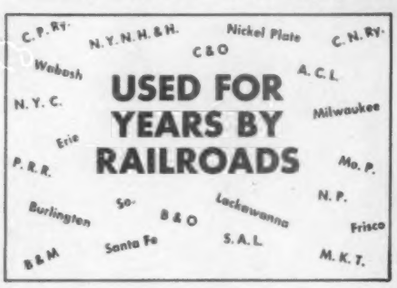

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to general superintendent of the Alberta district at Calgary, Alta. **G. A. Drummond** has been appointed acting assistant superintendent at Montreal. Mr. Martin was born at Montreal and

Michael Rennie Martin

joined the C.P. in 1916 as a car checker at Outremont Yard. He served two years as assistant superintendent of the Bruce division and eight years as assistant superintendent of the Montreal Terminals before his recent appointment.

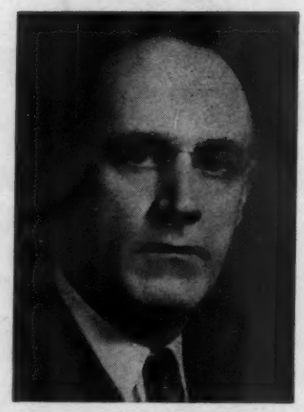
J. I. MacKay, general manager of the CANADIAN PACIFIC's Prairie region, with headquarters at Winnipeg, Man., has retired after 47 years of service with that road. Also retired is **H. C. Taylor,** general superintendent of the Saskatchewan district, with

E. S. McCracken

43 years of service. **E. S. McCracken,** former general superintendent of the Pacific region, who has been on leave recently for special duties, succeeds Mr. MacKay, while **C. E. Lister,** acting general superintendent of the Pacific region, replaces Mr. Taylor. **J. C. Jones,** general superintendent of the Alberta district, moves to Vancouver, B. C. Advanced to general superintendent at Calgary, succeeding Mr. Jones, is **G. E. Mayne,** superintendent of Montreal terminals. Mr. Taylor was born on November 5, 1887, at Wingham, Ont., joined the C. P. in 1908 as night operator at Cartier, Ont., and subsequently held various positions. From 1922 to 1930 he was in charge of the Eastern lines transportation department at Montreal, later transferring to Winnipeg in a similar post. He served as general superintendent of the Saskatchewan district since 1941.

Mr. McCracken is a native of Moncton, N. B., and began railroading with the C.P. as a fireman at Medicine Hat, Alta., in 1910. He later served as road foreman of engines, division master mechanic and assistant superintendent, and first became a superintendent in 1936. In 1942 he was advanced to general superintendent, serving in that post first for the Algoma district and, during the past four years, for the Pacific region.

TRAFFIC



The title of J. P. Derham, Jr. (above), freight traffic manager of the Seaboard Air Line at Norfolk, Va., has been changed to assistant vice-president. Mr. Derham has jurisdiction over solicitation and service

S. M. Dickerson, commerce agent of the NASHVILLE & ST. LOUIS, has been appointed assistant general freight agent, with headquarters at Nashville, Tenn. His former post has been abolished.

James R. Morrell has been appointed assistant traffic manager of the Eastern region of the AMERICAN SHORT LINE RAILROAD ASSOCIATION at Washington, D. C., effective July 1.

ENGINEERING AND SIGNALING

J. W. Wallenius, division engineer, Eastern division, of the PENNSYLVANIA, has been appointed assistant superintendent on the Chicago division.

OBITUARY

Clyde W. Pace, general manager, western district, of the MISSOURI PACIFIC LINES, with headquarters at St. Louis, Mo., died at the Missouri Pacific hospital on June 11. He had been ill for several months. Mr. Pace

was born at Knobnoster, Mo., August 8, 1893, and started railroading with the M.P. in 1910 as a telegrapher. Subsequently he held various positions and in 1939 became superintendent, serving in that capacity first at Poplar Bluff, Mo., and later at Kansas City.

Clyde W. Pace

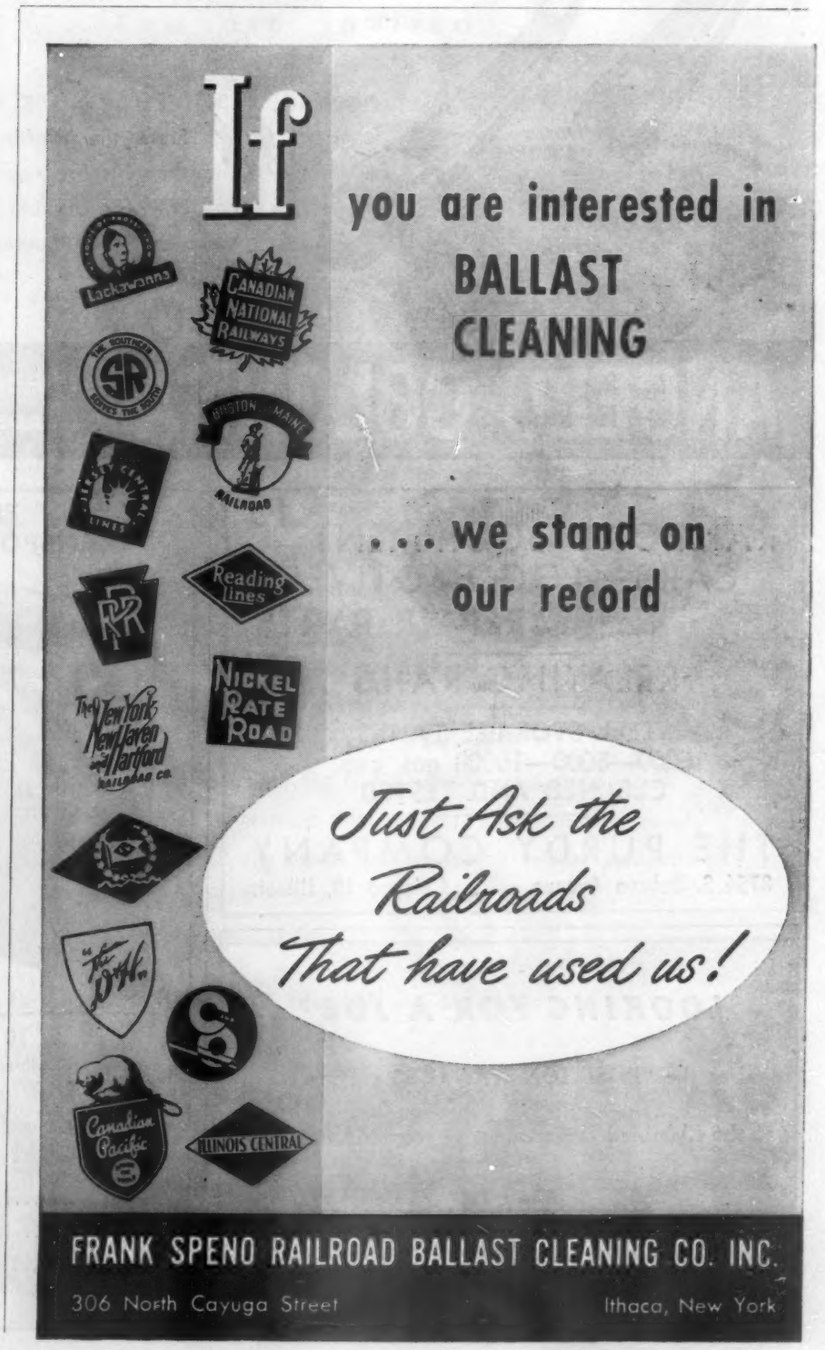
While on leave of absence from November 1942 to May 1943, he acted as deputy associate director for the Office of Defense Transportation at St. Louis, and on his return to the M.P. became assistant general superintendent of transportation. He was advanced to general superintendent of transportation in 1945 and to general manager, Western district, in 1949.

George A. Voelkner, late general manager of the CHICAGO & WESTERN INDIANA, and the BELT OF CHICAGO, whose death was reported in *Railway Age* of June 11, entered railroad service in June 1908 as a switchboard operator on the C. & W. I. at Chicago. He later held various positions, including chief electrician, supervisor of telegraph and telephones, assistant superintendent and superintendent, and in 1940 became assistant to general manager. From July 1941 to March 1942, he served as general manager of the Lehigh Valley at Bethlehem, Pa., and from March 1942 to January 1943, as assistant federal manager of the Toledo, Peoria & Western at Peoria, Ill., subsequently becoming general manager of the latter road. On his return to the C.&W.I. and Belt of Chicago in August 1948, he was appointed general superintendent, which position he held until his promotion to general manager of those roads in April 1948.

George A. Voelkner

Beryl Dole Maltby, late superintendent, Michigan division, of the NEW YORK CENTRAL SYSTEM, at Jackson, Mich., whose death was reported in the June 11 *Railway Age*, was born on Februray 28, 1892. Mr. Maltby entered service with the N.Y.C. system in November 1920 as yard brakeman on the Michigan Central at Battle Creek, Mich. Advanced to general yardmaster in 1929, he was appointed trainmaster at Jackson in 1941, and assistant superintendent at Chicago in 1945. He moved to Toledo in May 1946, and the following August became superintendent at Jackson.

Miles L. Austin, general industrial agent for the ST. LOUIS-SAN FRANCISCO at St. Louis, Mo., died at the Frisco hospital there on June 7 of heart disease. He had been ill for some time.



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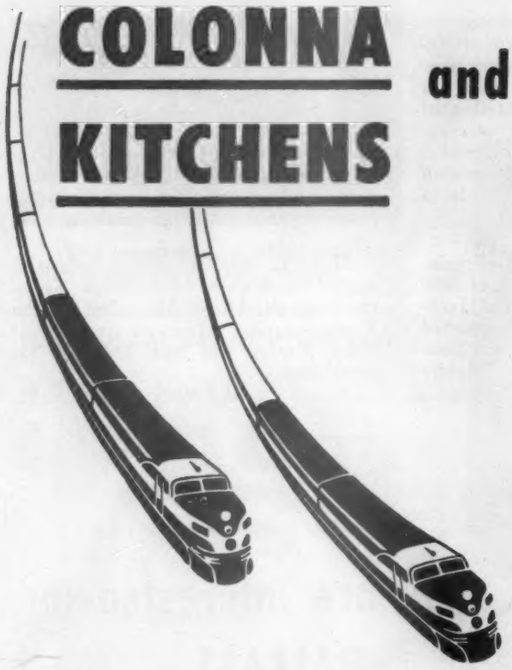

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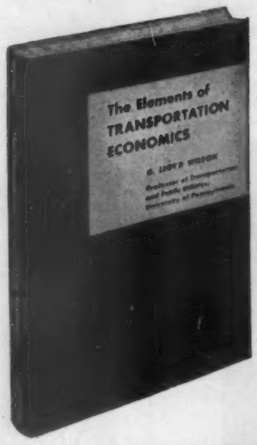

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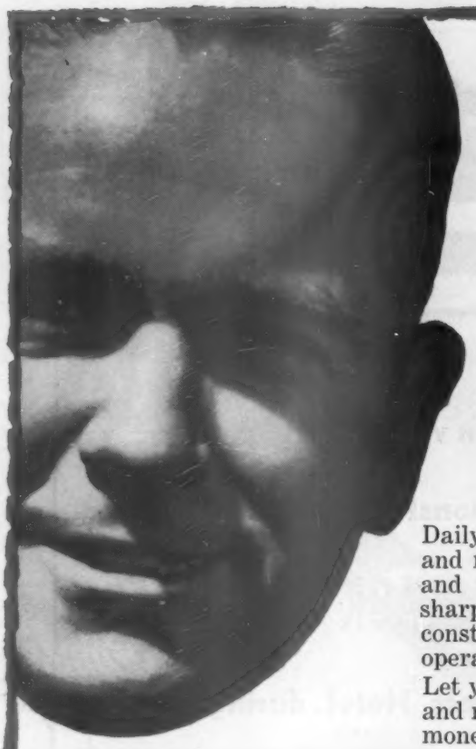

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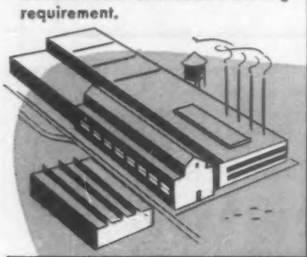

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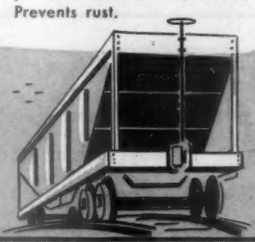

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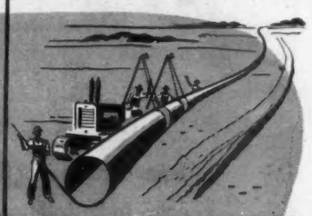

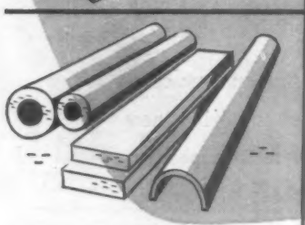

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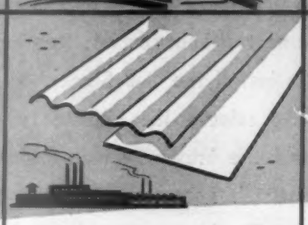

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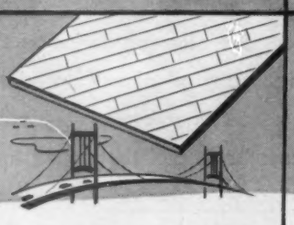

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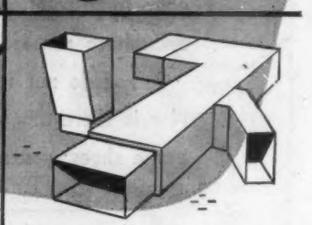

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Advertisers IN THIS ISSUE

A

American Steel Foundries 15
Association of Manufacturers of Chilled Car Wheels 31

B

Bethlehem Steel Company 3
Bituminous Coal Institute 14
Boston & Maine Railroad 85

C

Carey Mfg. Company, The Philip 84
Chicago Steel Service Company 86
Classified Department 85
Colonna, Angelo 82
Columbia Steel Company 10, 11
C-O-Two Fire Equipment Company 76
Crossett Lumber Company 17

D

Dednox Incorporated 78
Dyer Co. Inc., W. H. 85

E

Edgewater Steel Company 77
Electro-Motive Division, General Motors Corporation .....Front Cover, 19 to 30 incl.

G

General Electric Company 13
Great Lakes Steel Corporation 12
Gustin-Bacon Manufacturing Company 83

H

Hunt Company, Robert W. ... 85
Hyatt Bearings Division, General Motors Corporation 4

I

Iron & Steel Products, Inc. 85

M

Minneapolis & St. Louis Railway, The 69
Mississippi Valley Equipment Co. 85
Mortell Co., J. W. 80

N

National Malleable and Steel Castings Company 8, 9
National Steel Corporation 12
Norden Electric 85

O

Okonite Company, The 32

P

Purdy Co. The 82

R

Railway Educational Bureau, The 85
Republic Steel Corporation ... 16

S

Schundler Co., Inc., F. E. 18
Scullin Steel Co. 79
Sherwin-Williams Co. The .. 71
Simmons-Boardman Publishing Company 82
Speno Railroad Ballast Cleaning Co., Inc., Frank 81
Symington-Gould Corporation, The 87

T

Tennessee, Coal, Iron & Railroad Company 10, 11
Texas Company, The 2
Timken Roller Bearings Co. The .....Back Cover

U

Union Switch & Signal Company 6
United States Steel Company 10, 11
United States Steel Export Company 10, 11

W

Westinghouse Air Brake Co. .. 73
Western Railroad Supply Company 74

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